

***United States Court of Appeals
for the Second Circuit***



**APPELLANT'S
BRIEF**

74-2201

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P/S

In The
UNITED STATES COURT OF APPEALS
For the Second Circuit

Docket No. 73-2201

LILLIAN WEISS,

Plaintiff-Appellant,

-against-

CHRYSLER MOTORS CORPORATION and
CHRYSLER CORPORATION,

Defendant-Appellee.

On Appeal from the United States District
Court for the Southern District of New York

APPELLANT'S BRIEF

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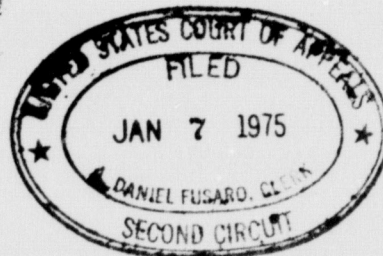


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UNITED STATES COURT OF APPEALS
FOR THE SECOND CIRCUIT

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LILLIAN WEISS,

Appellant,

-against-

CHRYSLER MOTORS CORPORATION and
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Appellees.

APPELLANT'S BRIEF

Docket No. 73-2201

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PRELIMINARY STATEMENT

On June 2, 1967, the plaintiff, Lillian Weiss, instituted this products liability and negligence action against the defendants Chrysler Motors Corporation and Chrysler Corporation (hereinafter "Chrysler") on account of grievous personal injuries suffered by her in an accident that occurred on November 14, 1964, while she was operating a 1960 Chrysler Imperial Sedan. A jury trial before the Honorable Thomas P. Griesa, U.S.D.J., was commenced on February 20, 1973. A verdict was returned for Chrysler, and from the judgment entered thereon plaintiff appeals.

In brief, plaintiff's argument at trial was that a critical part of the vehicle's steering assembly failed while she was operating the vehicle on the day in question. This part is called the Pitman arm stud, and, as will be discussed below, when it fails the driver loses all steering control of the vehicle.

Plaintiff claimed the failure occurred in two stages, the first of which was a fatigue fracture, which, if proved, would provide conclusive evidence of product defect. Plaintiff further claimed that the fatigue fracture ultimately progressed under driving stresses to

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a second, sudden and final fracture at the time and place of the
fateful accident.

Three issues are presented for review. They are interrelated, but the central and most crucial ruling assigned as error occurred on the plaintiff's rebuttal case, when Judge Griesa prevented Professor Dennis Rader of Yale University from testifying as to an essential laboratory experiment which he had performed, an experiment that was directed at the heart of Chrysler's defense. The results of this simple and demonstrative experiment, we submit, were so dramatic that they would have been dispositive of the matter. At the very least, had the jury heard Professor Rader's testimony there is every likelihood that Chrysler would not have secured a unanimous jury verdict in its favor.

During pre-trial discovery depositions, Chrysler's expert metallurgist, Mr. Donald Gregory, conceded that the Pitman arm stud fractured in two stages. Gregory was unable to deny the existence of a fatigue fracture, but Chrysler's trial counsel clung to vague contentions that the Pitman arm stud failure on November 14, 1964 had been caused by impact sustained sometime during the life of the vehicle. However, it was not until the beginning of Chrysler's direct case at trial that Chrysler advanced a specific impact theory. Through the testimony of a Mr. Sylvester Mazur, an employee of TRW (the manufacturer of the stud) and a man without an engineering or metallurgical education, Chrysler contended that the fracture was initiated by an impact between the vehicle's right front wheel and a 1" stump, which impact occurred as the vehicle left the road on November 14, 1964 destined for its final, fateful collision with a large tree.

A deformation had been found after the accident on the right front wheel rim. Mazur claimed that the force required to cause that deformation would be sufficient to fracture the critical Pitman arm stud on

the left side of the steering assembly. Therefore, Mazur concluded, the Pitman arm stud had not fractured because of fatigue failure - product defect, but rather due to an event occurring during the course of the accident itself.

Chrysler had provided no advance warning of its stump-impact theory, even though it was required to by the terms of Judge Griesa's pre-trial discovery orders. Having been deprived of the notice which she deserved, plaintiff, of course, had not anticipated Chrysler's theory and did not, and could not, attempt to negative conclusively such theory on her case in chief.

Professor Rader's laboratory test was simple and direct, and demonstrated unquestionably, as will be described below, that the impact of the right front wheel with the 1" stump could not have generated anything even approaching the amount of force necessary to fracture a sound Pitman arm stud. Professor Rader, using an identical wheel rim, produced an identical deformation to that found on the accident vehicle's rim with a force that would impose no more than 13,333 pounds per square inch on the Pitman arm stud. Professor Rader was further prepared to testify that a properly manufactured Pitman arm stud should under no circumstances fracture under a force of less than 48,000 pounds per square inch.

Thus, Mazur's claim that the impact which deformed the right front wheel rim also fractured the Pitman arm stud was simply false. But Judge Griesa would not allow Professor Rader to introduce his evidence on rebuttal, on the grounds that such evidence should properly have been part of plaintiff's direct case. This ruling, we submit, was entirely erroneous, was without foundation in fact or law, and constituted reversible error in and of itself.

Of course, Professor Rader's proffered rebuttal would not have been necessary had Mazur's testimony been excluded, as plaintiff submits it should have been. This particular assignment of error arises originally out of a motion made by plaintiff shortly before trial to strike the answer of Chrysler for failure to respond to plaintiff's interrogatories, which interrogatories requested information, tests, findings and conclusions regarding the failure of the Pitman arm stud. That motion, we submit, should have been granted. As will be pointed out below, the facts and the law were overwhelmingly in plaintiff's favor, and Judge Griesa came to the verge of precluding Chrysler from putting in any evidence with respect to the failure of the Pitman arm stud. However, the motion was denied on February 7, 1973, but only on the explicit condition that Chrysler divulge all of the information called for by the interrogatories in question prior to trial. Chrysler simply ignored the Court's order, and then was unaccountably permitted on trial to introduce its stump-impact theory through Mazur, over objection, even though his testimony was bottomed upon tests, and embodied findings and conclusions, all of the sort specifically called for by plaintiff's interrogatories and the Court's mandate of February 7, 1973.

This double failure by the Court, first in not granting plaintiff's pre-trial motion to preclude, and second in allowing the requested information to be introduced, constituted, we submit, additional reversible error. The trial Court's decisions on these points maximized the prejudicial impact of the Court's later exclusion of Professor Rader's laboratory test, which test was specifically designed to rebut Mazur's inadmissible stump-impact theory by demonstrating that the force produced by such an impact could not possibly have fractured a properly manufactured Pitman arm stud.

As mentioned above, Chrysler's own expert metallurgist and fracture analyst was Mr. Donald Gregory. Mr. Gregory and his large staff had subjected the failed Pitman arm stud to extensive tests at Chrysler's own elaborate laboratory facility in Highland Park, Michigan in 1968.

When his deposition was taken in early 1973, Mr. Gregory admitted his inability to preclude fatigue as the cause of the fracture in question, thereby significantly buttressing plaintiff's case. However, Chrysler never called Mr. Gregory to the stand. Instead, Chrysler undertook to elicit metallurgical and engineering opinion testimony from a Mr. Thomas Turnbull, an electromicroscopist who had assisted Gregory for half a day in October of 1968 by taking a series of photographs of the failed stud. The most salient feature of Turnbull's testimony was that it confluted, in many major respects, with Gregory's deposition testimony. Among other things, Turnbull was now certain that the fracture was impact-induced. Plaintiff attempted, on cross-examination of Turnbull, to confront him with the admissions of his superior, Gregory, the latter clearly qualifying as a "managing agent" of Chrysler within the meaning of FRCP Rule 32(a)(2). Judge Griesa would not permit this confrontation, and there was committed, we submit, yet another prejudicial error in this strenuously litigated case, an error, which taken in conjunction with the above-mentioned points, worked considerably to the detriment of the plaintiff.

ISSUES PRESENTED FOR REVIEW

1. Did the trial Court err in not striking the testimony of Chrysler's expert, Mr. Sylvester Mazur, whose theories, findings and conclusions had not been divulged by Chrysler prior to trial pursuant to the Court's order of February 7, 1973?

2. Did the trial Court err in excluding the rebuttal testimony of plaintiff's expert, Professor Dennis Rader, which testimony embodied the results of a laboratory test specifically designed to demonstrate that Mazur's surprise theories were fallacious?

3. Did the trial Court err in not permitting plaintiff's counsel, on cross-examination of Chrysler's expert, Mr. Thomas Turnbull, to confront Turnbull with the deposition admissions of Mr. Donald Gregory, a "managing agent" of Chrysler?

FACTUAL STATEMENT

The Accident

On November 14, 1964, the plaintiff drove north from New York City destined for Ridgefield, Connecticut. She was accompanied by her brother, David Weiss, by Rebecca Maraniss and Herman Maraniss, and by Modesta Hillary. David Weiss occupied the right front seat and the Maranisses and Miss Hillary rode in the back.

After leaving the Merritt Parkway in Connecticut, Miss Weiss proceeded north on Route 123. She testified she was driving at approximately 40 m.p.h. (138).^{*} She came upon a relatively straight stretch of road at approximately 12:30 p.m., and while proceeding down this portion of the road she encountered no other vehicles either immediately in front of or behind her car (136-37). The visibility was good and the weather was clear. Suddenly, she felt a "snap" or loss of tension in the steering wheel (247-48). Miss Weiss testified:

"Q. Now, as you were proceeding there, would you tell us, Miss Weiss, what occurred as best you can?

A. The steering wheel spun in my hand, there wasn't any connection, apparently, with the steering wheel ---.

^{*}Numbers in parentheses, unless otherwise indicated, refer to pages in the Appendix.

* * *

"A. There wasn't any connection with the steering wheel and the front wheels of the automobile.

* * *

A. The wheel was going to the right and then to the left and I held onto it and tried to correct whatever motion there was but I didn't have any control over the steering and the car veered to the right and slowly started off - the front right wheel first and then the rear right wheel - off the highway onto the grassy embankment and then I took my foot off - I decelerated immediately upon feeling the lack of control and I put on the brake, I don't know with how much pressure but the car continued to veer to the right and then the left front wheel followed and the left rear wheel followed and then there was the impact with the tree." (139-40).

The tree mentioned by Miss Weiss was off to the right of the highway, and the accident scene is best depicted in Exhibit 159 (48), which shows the skidmarks of the vehicle as it veered onto the grassy embankment, ultimately striking the tree which shows the signs of the impact at its base.

Mr. David Weiss died as a result of the accident. Miss Weiss suffered multiple and grievous injuries which brought her to the brink of death. Fortunately, by reason of the skillful medical treatment which she received, she managed to pull through. But her recovery was a long and painful one, and she has been left with severe permanent disabilities.

It is sufficient for this appeal to note Miss Weiss was in Norwalk Hospital for over 4 months after the accident, and that every extremity, both arms and both legs, sustained one or more fractures. Miss Weiss was 60 years of age at the time of the accident.

The plaintiff's car had been involved in no other substantial accidents since the time of its purchase in 1960. On August 2, 1964, some three months and twelve days prior to the tragic accident on

Route 123, the vehicle was involved in a minor collision in New York City at the intersection of East 77th Street and Third Avenue. Miss Weiss was operating the car at the time, and it was struck, from the side, in the vicinity of the left front wheel by a vehicle driven by one Frederick Elfers. The minor damage sustained at the time is depicted in Exhibits 82 and 83 (37 & 38).

Immediately after the Elfers collision, the plaintiff's automobile was brought to the Chrysler Manhattan Service Center East, a service unit wholly owned and operated by Chrysler, where certain repairs were performed.

It was plaintiff's contention that Mr. Elfers had passed through a red light traveling south on Third Avenue, and this negligence on his part caused the August 2, 1964 accident. Prior to the commencement of the instant action, three separate personal injury actions had been brought in the Supreme Court, New York County, on behalf of those persons who had been passengers in the Chrysler vehicle at the time of the tragedy on November 11, 1964, including an action on behalf of the Estate of David Weiss. Chrysler had been named as a defendant in all of these actions, which were ultimately consolidated for trial. During the trial of the state court action, Chrysler had argued that the ultimate failure of the steering mechanism had been caused by damage sustained in the Elfers accident of August 2, 1964. To obviate the risk that Chrysler would succeed with that argument in this action, plaintiff joined Elfers as a defendant in her action against Chrysler in the District Court. However, when on its direct case Chrysler finally conceded that the Elfers collision could not possibly have caused the steering failure (Mazur, 745-48), the action against Elfers was discontinued.

Alfred L. Moseley's Investigation
and Accident Reconstruction

On November 24, 1964, the accident scene on Route 123 was visited by Mr. Alfred L. Moseley, an expert in the scientific study and reconstruction of automobile accidents. Mr. Moseley had been retained by the insurance company insuring the Weiss car.

Mr. Moseley has been involved in accident investigation and reconstruction since 1949, beginning his study at that time with the Harvard School of Public Health. He later became connected with the Harvard Medical School Department of Legal Medicine (261-62), and has provided extensive instruction to state and local police departments in Massachusetts and New Hampshire with regard to the investigation of motor vehicle accidents (265-68). Mr. Moseley has also testified before the House International and Foreign Commerce Committee and several state legislatures with regard to his field of expertise (269).

Mr. Moseley's investigation of the Weiss accident scene and the car itself revealed that the Pitman arm stud, a critical part of the steering mechanism, had been fractured. The question of when, where, and how the Pitman arm stud fractured is central to this case. It is important, therefore, to focus on this critical piece of equipment at the outset and describe how it relates to the entire steering assembly of an automobile.

Exhibit 180 (50) probably best depicts those parts of the steering assembly with which this case is concerned. The wheels shown are the front wheels of a typical automobile, such as the 1960 Chrysler here involved. Slightly to the right of center can be seen the Pitman arm, which is connected to the center link by the bolt known as the Pitman arm stud. The stud itself cannot be

seen in Exhibit 180, as it is surrounded by a rotating metal housing formed by the center link and the Pitman arm itself. Exhibit AP (33) illustrates a cutaway of that housing and shows the Pitman arm stud itself as it sits therein. An exact duplicate of the Pitman arm stud here involved was introduced at trial as Exhibit AM. That stud is approximately 5/8 inch in diameter at its center, and is approximately 2-1/2 inches long.

Referring again to Exhibit 180, the other end of the Pitman arm is indirectly connected to the steering column itself by a series of gears. This connection is not illustrated in Exhibit 180. Over to the left of the center link is the idler arm. The end of the idler arm which is not attached to the center link is bolted to the vehicle in such a fashion that it is free to rotate from right to left. When the steering wheel itself is turned in either direction, forces are transmitted into the Pitman arm, causing it to swing laterally right and left, thereby moving the center link in a direction perpendicular to the heading of the vehicle. This right and left movement is then transmitted to the tie rods on either side of the center link, and from there the force proceeds into the knuckle arms which are attached to the wheels themselves. In this fashion, the wheels are turned either right or left.

The idler arm is connected to the center link by a stud which is identical in design to the Pitman arm stud. The tie rods are also connected to the center link by studs which are very similar in design, and are surrounded by a comparable metal housing (Exhibit AQ) (34).

When Moseley examined the steering assembly after the accident he also found that the tie rod stud connecting the left tie rod to the center link had been pried out of its housing (447-48). But what was most significant was that, of all of the studs in the steering

assembly, only the Pitman arm stud was found to have been actually broken or fractured across (292). Moseley took several color photographs which clearly show that the Pitman arm stud had been fractured cleanly across (342-50; Exhibits 187 and AU [51 & 35]).

Thus, the fact that the Pitman arm stud was the only stud in the entire assembly which had been fractured created a very strong inference that this stud was weaker, in some fashion, than its companion studs, which were almost identical in shape and design. Of course, as can be readily seen from Exhibit 180, if the Pitman arm stud is in fracture, the front wheels of the car will no longer be attached to the steering column and the driver will lose all control over the direction of the vehicle (Moseley, 327; Gordon, 582), a result directly consistent with Miss Weiss' description of what she experienced in the moments just before the car struck the tree.

But Moseley's findings did not end there. His inspection of the tire marks on the pavement produced convincing evidence that the vehicle had been in steering failure prior to its leaving the road. As can be seen in Exhibit 159 (48), there are two skid marks pointed in the general direction of the impact tree. The outer mark, or the one closest to the center of the road, is rather narrow and remains fairly constant in width. However, the inner mark changes dramatically in width; to wit, at a point 55 feet south of the tree that mark is 1/2 inch wide, and it increases to a width of 9 inches thirty feet from the tree (284-85), a width greater than that of the tire itself. The thin outer mark had to be made by the left rear tire because a rear tire cannot be steered. Thus, it remained in a fixed position relative to the axle as the vehicle headed toward the tree (309). Front tires, of course, are steering wheels, and may be turned in such

a way that their angle is more severe than the angle of the vehicle as it heads off the road.

As Moseley went on to explain during his testimony, the physical evidence on the roadway itself provided significant proof of steering failure. Because the Pitman arm stud fracture occurred while the vehicle was proceeding north on Route 123, the 4 inch crown in the road had caused the vehicle to veer to the right (320-21 & 335). Even though the center link of the steering assembly, in such a situation, would be disconnected from the steering column and the steering wheel, as demonstrated in Exhibit 180, the front wheels remain joined together by the various linkages. When the right front wheel hit the grassy embankment on the side of the road this produced a braking effect on that particular wheel, which caused both front wheels to go into an extreme right turn relative to the axis of the car (321-37). This turn was much more severe than could have been produced if the steering assembly had remained connected to the steering column and under the control of the driver (323 & 329). Thus, the skid marks shown on Exhibit 159 were proof of steering failure, or, as stated by Mr. Moseley:

"It is to me a fingerprint of steering failure while the vehicle is in transit." (339).

Professor Gordon's Examination

Moseley's investigation was only the beginning of the proof of product failure. On December 4, 1964, the various parts of the steering assembly were removed from the vehicle and brought to Professor Robert B. Gordon of Yale University for examination and testing.

Professor Gordon received his doctorate in engineering from Yale University, and then spent two years at Columbia University. He then returned to Yale in 1957 and has specialized in the research and teaching of metallurgy (539-40).

After receiving the parts, Professor Gordon studied the assembly as a whole. His examination corroborated Moseley's finding that none of the other studs in the entire assembly were in fracture (574-75). He then removed the two halves of the Pitman arm stud from the Pitman arm and the center link so that he could examine the fracture surfaces more carefully (543).

Professor Gordon's most significant findings were related by him as follows at the trial:

"A. Yes. The most striking characteristics of the broken surface of the pin was that the oxidation on that surface was of two kinds: one, a dark-blue oxidation; and the second oxidation, which is of the ordinary rusty-brown color.

Q. What was the significance of that, sir, or those, I guess, whatever?

A. The parts, as we were told, had been exposed to the weather for at least a few days before they reached our laboratory. We know that ordinary carbon steel will rust rather easily when it is exposed to the atmosphere, and the rust which first forms is characteristically a brownish-red and rather flaky substance. That brownish-red-like flaky rust was in evidence over the whole fracture surface of the pin. Underneath this, on part of the fracture surface, was a dark-blue oxide of the type that is ordinarily formed only over a rather prolonged period of time or during the heat treatment of a material in the manufacturing shop. We found that a substantial part of the fracture surface was covered with this dark-blue oxide; that the center part of the pin was covered only with the light rust-colored oxide. We interpreted this as being evidence for the presence of a pre-existing crack in the pin, which had been present for some considerable period of time before the final accident took place; and that the lighter area in the center of the pin represents that section of the metal which failed in a relatively recent time, at about the time of the final accident." (544-45) (emphasis added).

Exhibit 171 (49) is a diagram prepared by Professor Gordon.

The cross-hatched areas delineate the portions of the fracture surfaces which were covered by the dark-blue oxide, indicative of a pre-existing fracture (547-49). The pre-existing fracture covered approximately 56 percent of the surface diameter area of the Pitman arm stud. With respect to the formation of dark-blue oxidation, Professor Gordon testified as follows:

"[O]xidation of this type, on a fracture surface, develops over a considerable period of time, which is several months at least, and more often, more commonly, perhaps as much as a year or several years."
(629).

Professor Gordon determined that the pre-existing fracture was a fatigue failure, a type of fracture that develops in weakened metal over a period of time when that metal is subjected to ordinary stresses and strains (566). The evidence of fatigue failure was provided by the existence of "clam shell" markings which Professor Gordon observed in the dark oxidation areas (566 & 633). The "clam shell" marks were observable without the aid of a microscope (624).

"Clam shell" markings indicate the progressive growth of a fatigue failure. Each mark describes a stage in the development of the fracture. As Professor Gordon put it, through the application of small, ordinary forces, "the crack grows and stops and grows and stops, and. . . the places where it stops are marked by a ridge or break in the fracture surface" (626; see also 635).

It was Professor Gordon's opinion that the tragic events of November 14, 1964 were ultimately caused as follows:

"I believe that the sudden steering failure was a consequence of the final failure of the Pitman arm pin, which had been weakened over a considerable period of time by the growth of one or two fatigue cracks; that when the cross-section of the pin had been so reduced

by the growth of these cracks that it could no longer sustain the forces applied to it, that a sudden failure of the remaining section of the pin took place, leaving the driver with no control over the steering of the front wheels" (582).

Professor Gordon testified that there was no doubt the Pitman arm stud in the plaintiff's vehicle was defective (637). This defect could have been produced by a manufacturing process that either created inhomogeneity in the material or a tool mark or nick in the surface of the stud. Any of these would have been sufficient to initiate a fatigue crack in a stud composed of sound material (584). Although Professor Gordon's examination did not reveal any inhomogeneity in the underlying metal, he could not say one way or the other whether such a defect existed inasmuch as his examination, of necessity, was limited to the surfaces of the metal (640). He did not assess the adequacy of the stud's design since the manufacturer's specifications were not made available to him (608-9). In Professor Gordon's opinion, if the Elfers accident of August 2, 1964 played a part in the November 14, 1964 failure, it was by initiating or aggravating a fatigue crack in a stud already weakened by an original manufacturing defect (585).

Chrysler's Strategic Problem:
Admissions By Its Own Metallurgist

Chrysler had copies of the reports prepared by Moseley and Gordon as early as 1968. The findings and conclusions of these men obviously presented serious problems for the defense, but there were more to come.

In September of 1968, the fractured pieces of the Pitman arm stud were sent to Chrysler's headquarters in Detroit for detailed analysis. They were delivered to Mr. Donald Gregory, who, as he testified on

the taking of his deposition, had received his degree in metallurgical engineering from the University of Wisconsin, and had done graduate work at the same institution (80). At the time he performed his analysis, Mr. Gregory had been employed by Chrysler for some 13 years. For the first five years he had been employed in the Production Evaluation Section of the Analytical Department, performing failure fracture analysis. Thereafter, he became a member of the metallurgical specifications group in the same department, with the responsibility of detailing metallurgical specifications on Chrysler drawings (78-79).

In cooperation with Mr. A. H. Blodgett, Mr. J. H. Nelson, and several other trained metallurgists, Mr. Gregory conducted an extensive examination of the fractured Pitman arm stud pieces for a period of approximately two weeks (86-87; 104). Numerous photographs of the fracture surfaces were made by personnel on the laboratory staff (92), and the pieces were also studied by Chrysler's steering and extension experts (100).

On October 2, 1968, Gregory personally brought the pieces to Fullam Associates in Schnectady, New York, which is a firm that specializes in the making of photographs through the use of electron microscopes (88). Numerous photographs were taken there under the direction of Mr. Thomas P. Turnbull, but no laboratory tests or investigations were performed in Schnectady (94-95). Mr. Gregory remained in Schnectady with the pieces for only one day (88). In actuality, the photographs taken by Fullam Associates did not prove to be very helpful. As Mr. Gregory put it: "No, it turned out that they didn't do me much good in my work." (118).

Mr. Gregory's deposition was taken on two occasions, on November 10, 1972 and February 1, 1973. At the first session, Mr. Gregory made a highly significant admission: after approximately two weeks of extensive study by Chrysler's own highly-trained metallurgists, Gregory was unable to refute Professor Gordon's finding that the accident was caused by a pre-existing fatigue fracture. Quite simply, Gregory had absolutely no opinion "as to what caused the fracture in the piece of metal" (101). And most significantly, he made the response stated below to the following question:

"A. Do you have an opinion, at this time, to the effect that the fracture of the pieces of metal you examined in September or October, 1968 had been fractured as a result of an impact load-induced failure to the Pitman arm stud?

A. I have no such opinion." (102)

Chrysler's counsel refused to allow Mr. Gregory to produce his notes and reports relating to the extensive study which he had conducted. After a motion was made by plaintiff for production of these items, Judge Griesa ruled, on December 11, 1972, that the material was to be turned over to plaintiff's counsel and that Mr. Gregory was to be returned to New York for further examination with respect to such material (56-58).

When Gregory's deposition recommenced on February 1, 1973, several startling discoveries were made. Gregory handed over a memorandum (45-46), dated October 30, 1970, which he had prepared for a Mr. Jack Dudley of Chrysler's legal staff. This memorandum, as he described it, was "in essence my conclusions regarding the fracture analysis that I conducted on the part in question" (125). The most important admission to be gleaned from this 1970 Chrysler memorandum was that Gregory had concluded that the fracture of the Pitman arm stud had

occurred in at least two stages; to wit: "The ridge running across the diameter is a major arrest point and shows that the fracture took place in at least two stages." (45). This was in direct accord with the findings of Professor Gordon.

Furthermore, when Gregory was specifically asked at the February 1, 1973 session whether he had any opinions regarding the role of fatigue in causing the fracture, he stated:

"When I was asked about an opinion, the questions that prefaced, 'Had I an opinion' were prefaced in the light as I recall, 'did the part fail in either fatigue or impact?'

MR. PROFETA: And as to that you have no opinion?

THE WITNESS: I have no opinion, yes."
(132) (emphasis added)

This statement by Gregory was made 20 days before the trial started and 4-1/2 years after he and his laboratory staff had examined the stud. When plaintiff's counsel probed further as to the existence of fatigue as a cause of the two stage failure, Gregory responded:

"The remaining portion of the fracture was indeterminate. We couldn't tell - I couldn't tell as to whether both stages were impact or fatigue from my examination."
(116) (emphasis added)

Although Gregory had now corroborated Professor Gordon with respect to the existence of a two-stage fracture, he was not willing, during his second deposition session, on February 1, 1973, to admit that the first stage occurred before the accident of November 14, 1964 (126-27), although he did concede that one area of fracture occurred before the other (128-29). However, persuasive evidence in this regard was contained in Exhibit 148 (41-44), which exhibit was a compilation of notes made by Gregory in Schnectady while the electron microscope photographs were being taken by Thomas Turnbull of Fullam

Associates (117). These notes, which were produced pursuant to the Court's order of December 11, 1972, began with the following "bomb-shell": "Part was running cracked (rounded edge)" (emphasis added) (41). The significance of the "rounded edge" will be discussed below in Point III.

Thus, at this stage of the proceedings, expert metallurgists on both sides of the case agreed that the Pitman arm stud was operating in a cracked condition prior to the accident of November 14, 1964, and that the fracture of the vital stud had occurred in two stages. While Gregory was unwilling to concede that the first fracture stage was absolutely due to fatigue failure (i.e., product defect), he had to admit on deposition that he had no opinion to the contrary. Given a two-stage fracture, and accepting the integrity of Professor Gordon's observations as to the dark-blue oxide color and clam shell markings, plaintiff's case of product defect seemed extremely persuasive, if not insurmountable.

Chrysler's Pressing Need - To Find an Alternative to Fatigue for the First Stage

Now Chrysler desperately needed to find an alternative to fatigue as an explanation for the first stage of the fracture. If it did not find such an alternative, it would not matter that Chrysler could characterize the second stage of the fracture as impact-caused. Professor Gordon would not quarrel with such a characterization as to the second stage - as noted above on pages 14-15 he had found that the remaining central portion of the Pitman arm stud had finally ruptured by reason of the stresses and strains of ordinary steering, which are, in effect, impact forces transmitted from the wheels into the steering assembly (582).

Chrysler had a copy of Gordon's report of December 17, 1964, and it well knew what his testimony would be. Lillian Weiss had already been deposed, and it was no secret that she would testify that she simply found the car to have no steering control while proceeding down Route 123. If the jury were convinced that the Pitman arm stud was "running cracked", as Gregory's notes indicated, the likelihood was overwhelming that the jury would accept as true the account of the accident as stated by the plaintiff, Professor Gordon and Mr. Moseley, and find that the remainder of the pin had failed by reason of the impact forces arising from normal road driving. Chrysler's task was made doubly difficult because Moseley would testify, as Chrysler knew, that the skidmarks independently showed the vehicle to be in steering failure before it left the road.

Plaintiff's Efforts to Acquire
Information as to Chrysler's Theory

The first information which plaintiff received from Chrysler as to its explanation for the cause of the fracture of the Pitman arm stud came on May 12, 1971, in answer to plaintiff's interrogatory no. 52 (24-25). It should be noted, at this juncture, that plaintiff's set of interrogatories which included no. 52 was served on November 24, 1970, and it was only after Chrysler was fined \$200 by order of Judge Cannella dated April 13, 1971 (Record 48), in response to plaintiff's first motion to strike Chrysler's answer, that a response to interrogatory no. 52 was forthcoming. That interrogatory called for a summary of the facts and opinions as to which each of Chrysler's experts was expected to testify. Chrysler answered, in relevant part, as follows:

"Issac Stewart, it is anticipated, will testify based upon repair and service records from Chrysler Manhattan, reports of Messrs. Moseley and Gordon, as well as testimony of

witnesses and passengers at the time of the accident, to the effect that the failure of the Pitman arm stud was due to the impact of the vehicle with a tree at the time of the accident. . . ." (24-25) (emphasis added).

Of course, the only relevant "tree" at the accident scene was the final impact tree, and it was certainly obvious, after the deposition of Gregory in November, 1972 and February, 1973 that this theory would no longer do Chrysler any good. It was now stuck with a two-stage fracture. Unless the first stage could also be attributed to impact, the fatigue explanation would win the day and also the case.

Plaintiff served additional interrogatories on Chrysler on October 11, 1972 (26-29). Interrogatory 3(a) read as follows:

"State all the causes which contributed to causing the accident of November 14, 1964."

Included in the same set of plaintiff's additional interrogatories were numbers 3(b) and 3(c). To summarize, these questions asked for Chrysler's contention with respect to the contribution, if any, made by the Elfers accident of August 2, 1964 to the ultimate fracture on November 14, 1964, and, with respect to such a contention, the interrogatories called for a detailed description of the damage involved and in what fashion it had played a contributing role.

As mentioned above, in the previous state court action, Chrysler had attempted to pass the responsibility for causation off on Elfers, and plaintiff certainly had a right to know if that tactic would be utilized again. The trial Court recognized this fact, and on September 29, 1972 (52-53) made the following ruling:

"Now in addition, the court directs that plaintiff's counsel be permitted to serve an interrogatory relating . . . to Chrysler's contention about the effect of the Elfers accident, such interrogatory to be served no later than October 11, 1972, and to be answered no later than October 31, 1972." (53).

No answers were forthcoming, and after Chrysler made specious objections to these interrogatories by letter, on November 17, 1972 the trial Court again ordered Chrysler, in an unrecorded conference, to provide answers forthwith. Under cover of a letter of December 22, 1972, Chrysler submitted answers dated November 8, 1972 (30-31) which were totally unresponsive, thereby ignoring the Court's directives of September 29, 1972 and November 17, 1972. Realizing, undoubtedly, that its original answer to interrogatory 52, quoted above, would no longer suffice, Chrysler merely responded to plaintiff's legitimate query in interrogatory 3(a) with a totally illegitimate answer; namely: "Objection" (30).

With respect to Chrysler's contention as to the contribution, if any, made by the Elfers accident, Chrysler simply responded as follows:

"The defendants at the present time make no contention, one way or another, with regard to the prior accident since it is the plaintiff who claims a causal connection in this regard." (30).

And in response to interrogatory 3(c), which asked for a detailed description of the contributing role played by the Elfers accident, plaintiff was merely referred to Chrysler's repair record which set forth the items allegedly repaired after the Elfers accident (30-31).

Plaintiff's Motion to Strike Chrysler's Answer
and the Court's Order of February 7, 1973

Plaintiff immediately countered with her second motion to strike Chrysler's answer, pursuant to Rule 37(b)(2)(C) and(d) of the FRCP. At this time Chrysler's dereliction was extremely serious and plaintiff's motion was more than warranted under the facts and the law; i.e., (1) Chrysler had already been fined \$200 by Judge Cannella on April 13, 1971 for its earlier failure to make responsive answers to

interrogatories, and (2) Chrysler was now blatantly disregarding two explicit orders of the trial Court, made on September 29, 1972 and on November 17, 1972, which orders had mandated responsive answers to these very interrogatories. The legal precedents were overwhelmingly in plaintiff's favor, and will be set forth below in Point I.

On February 7, 1973, Judge Griesa ruled on plaintiff's motion (59-76). The Court recognized plaintiff's legitimate need for a revelation of Chrysler's contention respecting the Elfers accident (60). With this in mind, the Court was initially disposed to grant plaintiff's motion to the following extent:

"What you [the plaintiff] are doing is forcing them to analyze the case and to analyze the existence of prior fractures. Maybe what should be done is, if they won't disclose this, they should be precluded from putting in any evidence on the trial as to fractures." (64)
(emphasis added).

We respectfully submit that preclusion was precisely that remedy that should have been invoked. Sadly, it was not. Plaintiff submits that this was the first of a series of rulings by the trial Court which worked to the immense disadvantage of the plaintiff and have led, inevitably, to this appeal. The full scope and ramifications of this ruling will be more fully discussed below under Points I and II.

Judge Griesa relented in his early determination to preclude Chrysler because of representations made by Chrysler's counsel, upon oral argument, that Chrysler simply did not know how the Pitman arm stud came to be fractured. Significant, though, was the admission by Chrysler's counsel that the Pitman arm stud was in fracture prior to the accident of November 14, 1964. Counsel's representation went as follows:

"Then I had the occasion to speak to Mr. Schwab. The whole problem here is that they are asking for a contention as to the accident. And we honestly do not know."

*

*

*

"We have examined the bolt. We have found indications of something happening to the bolt prior to the accident of November 14. But there is no expert - no expert - that can get on the witness stand and say, 'This occurred, this impact damage to this bolt occurred because of the accident in August.' This damage was not found, as far as we know." (65) (emphasis added).

However, further on in the argument, Chrysler's counsel shifted ground a bit and demonstrated an unwillingness to toss out the Elfers accident completely as a possible cause:

"This is our contention, your Honor. The contention is not that we are saying that it occurred, but we are saying that we don't know. We know that something did occur prior to the November accident. The inference is there from the overall evidence that it probably occurred during the August accident." (66) (emphasis added).

Thus, based upon the above representations, the Court denied plaintiff's motion (69-70; 76). However, Judge Griesa made it crystal clear that if, prior to trial, Chrysler obtained any additional information regarding the mode of the pre-existing fracture, it was to be presented to plaintiff (73-76). This was required, not only because of additional interrogatories 3(a), 3(b) and 3(c), but also because of original interrogatories 45 and 46, propounded on April 24, 1970 (9-16A), and additional interrogatories 52-58, propounded on November 24, 1970 (17-21). Interrogatory 45 requested the following information:

"Following the alleged failure of the steering and the stud on the occasion in question on November 14, 1964, were any tests, examinations or inspections made by defendant, or in defendant's behalf, in an attempt to determine the cause of the failure." (15-16).

Interrogatory 46 asked for detailed information with respect to each such test, including, in sub-section (j), "its results and the conclusions arising therefrom." (16). Interrogatory 52 was described above at page 20. Interrogatory 58 requested information, conclusions and opinions derived from any tests or studies conducted on behalf of Chrysler (19). This interrogatory was never answered.

Chrysler had answered interrogatories 45 and 46 on May 12, 1971 by describing the electron microscope photographs made by Thomas Turnbull of Fullam Associates in Schnectady on October 2, 1968 (23). As to these photographs, Chrysler stated that Mr. Turnbull "arrived at his conclusion of an impact load induced failure to the Pitman arm stud resulting from the happening of the accident." Chrysler also stated that its own metallurgical engineer, Mr. Donald Gregory, "with many years of experience in failure analysis", had "arrived at a conclusion similar to that of Thomas R. Turnbull."

On November 10, 1972, it became clear, upon the taking of Gregory's deposition, that Chrysler's answer to interrogatory 46 was incorrect as to Gregory, inasmuch as he conceded there had been a two-stage fracture, that he had no opinion as to the cause of the accident, and that he could not rule out fatigue as a causative factor. It was also clear, because of Gregory's admission that the fracture occurred in two stages, that Chrysler's theory of fracture caused by impact with the tree (see p. 21, above) would no longer do).

The Court, focusing upon interrogatory 46 as well as additional interrogatory 3, laid down the following rules:

"Mr. Lewis, all I am saying is that Mr. Profeta has focused our attention on Interrogatory 46 Interrogatory 46, like other interrogatories, is a continuing interrogatory. If before the trial you acquire information or reach conclusions that are different from what is stated in Interrogatory 46, and if those conclusions and information have

not been disclosed in some deposition, then you are under an obligation to amend your answer to Interrogatory 46. The same thing is true of these interrogatories 3(b) and 3(c) we have talked about. And it is true, undoubtedly, of other interrogatories."
(75) (emphasis added).

Thus, plaintiff's counsel left the Courthouse on February 7, 1973 without obtaining any sanctions against Chrysler and as unenlightened as before with regard to Chrysler's theory respecting the mode of the first stage of the fracture. But at least plaintiff had been assured that if Chrysler did have, or did develop, an alternative to fatigue as the cause of the first fracture stage, or if Chrysler did possess any test information not yet revealed to plaintiff, all that material and information would be made available to plaintiff prior to trial.

Unfortunately, this assurance proved to be of no benefit to plaintiff because Chrysler continued to flaunt the directives of Judge Griesa. Plaintiff never received any additional information from Chrysler prior to trial, and, as pointed out below in Point I, this injustice was compounded when Chrysler was nevertheless allowed to introduce such additional information into evidence on its own direct case.

Plaintiff Put in her Direct Case Without Knowledge of Chrysler's Theory

Plaintiff launched into her direct case, entirely unenlightened as to the crucial alternative to fatigue that Chrysler would present as to the cause of the first stage of the two-stage fracture admitted to by its own metallurgist, Mr. Donald Gregory. Of course, as will be discussed below in Point II plaintiff had no duty to try to anticipate Chrysler's defense. With this in mind, plaintiff put on what, we submit, was an overwhelming case in chief, based primarily on the testimony of the plaintiff herself, Mr. Alfred Moseley, and Professor

Gordon, which testimony has already been described above.

Plaintiff also called Mr. Stephen Richard as an expert witness. Mr. Richard is a "front end" mechanic with more than 18 years of experience in the field of automotive repair and maintenance work (643). He is the owner and operator of the Somerset Spring and Alignment Shop in Raritan, New Jersey (684), a large facility which can easily accommodate 60 to 70 automobiles at the same time (685).

Mr. Richard stated categorically that, in his experience, it is almost impossible to crack or fracture a properly manufactured Pitman arm stud. This stud is designed to be manufactured from extremely hard material (669), and Mr. Richard could not conceive of any sort of accident as a result of which he would expect to find an originally sound and properly manufactured stud to be fractured (689), especially not as a result of the relatively minor impact sustained in the Elfers accident (698). In fact, as Mr. Richard put it:

"Q. . . . Have you in your years of doing this work ever seen a Pitman arm pin of any car's manufacture fracture as a result of impact in an accident? Have you ever seen that?

A. No, I have never seen one." (697).

Mr. Richard also demonstrated conclusively (by testimony that went totally unrebutted by defendant) that Chrysler had been negligent with respect to the repairs that it performed after the incident of August 2, 1964. As noted above, immediately after the Elfers incident, the vehicle had been brought to Chrysler's service unit for repairs. Mr. Richard examined the photographs which depicted the damage received by the vehicle in the vicinity of the left front wheel as a result of the Elfers collision (Exhibits 82 and 83) (37 & 38). He then testified that, had the vehicle been brought to him for repair, the

observable damage would have caused him to perform a complete front end inspection, including an alignment of the front wheels, in accordance with sound and proper maintenance and repair practice (652-53, 678 & 694).

Mr. Richard examined Chrysler's Estimate of Repairs dated August 3, 1964 (Exhibit 155) (47), the collision insurer's appraisal of August 4, 1964 (Exhibit 96) (39) and Chrysler's final repair bill (Exhibit 99) (40). As he testified, the terms of the Estimate clearly contemplated a front wheel alignment (659), which item was specifically allowed by the appraiser (659). Chrysler signed to do the work listed on the appraisal for a total amount of \$389.79, but, unaccountably, the bill itself (in the total amount of \$369.79) reflected the fact that alignment work was not done (660).

Mr. Richard then examined the left front tire which had been taken from the Weiss vehicle (Exhibit 163) and found decisive evidence thereon that it had, in fact, been running out of alignment for quite some time before and up to the accident of November 14, 1964 (660-64, 679-80). In the opinion of Mr. Richard, the significant malalignment of the front wheels would have put considerable pressure on a cracked Pitman arm stud, and would have dangerously enlarged that crack, whether or not such a crack had been initiated before or after the Elfers accident (680-81). As mentioned above on page 8, Chrysler later conceded that the Elfers accident could not possibly have damaged a sound Pitman arm stud, and Elfers was dropped as a defendant.

Plaintiff now rested. A very strong prima facie case had been presented with respect to the existence of a pre-existing fatigue fracture, leading to a complete rupture of the Pitman arm stud on that fateful day in November of 1964, which final rupture caused Lillian Weiss to lose complete steering control of the vehicle.

Now it was Chrysler's turn. Nothing plaintiff had proved was inconsistent with the deposition testimony of Chrysler's own expert metallurgist, Mr. Donald Gregory. Thus, Chrysler's serious problem remained unsolved - how could Chrysler avoid Gregory's admission of a two-stage fracture, and develop an alternative to fatigue as an explanation for the cause of the first stage. The manner in which Chrysler responded on its case in chief, in defiance of the trial Court's own pre-trial rulings, and the trial Court's refusal to allow plaintiff to meet this response with rebuttal testimony, is what this appeal is all about.

POINT I

CHRYSLER'S CONTENTION, THROUGH ITS WITNESS MAZUR, AS TO THE CAUSE OF THE INITIAL FRACTURE WAS CONCEALED BY CHRYSLER'S COUNSEL DURING PRE-TRIAL DISCOVERY AND SHOULD HAVE BEEN EXCLUDED BY THE TERMS OF THE COURT'S ORDER OF FEBRUARY 7, 1973

Chrysler's most notable response to its "first-stage" dilemma was in the way of non-response. The non-response was of an elementary sort - Chrysler simply failed to call Mr. Donald Gregory to the stand. Instead of presenting to the jury its own expert metallurgist and fracture analyst, who had studied the Pitman arm stud pieces for approximately two weeks and had conducted extensive tests with respect to those pieces, Chrysler called the metallurgist's hired technician, Mr. Thomas Turnbull of Fullam Associates, and Sylvester Mazur, a vocational school-graduate employed by TRW (which company manufactured the stud), who quickly became an "expert" in every field relevant to the case.

With respect to Chrysler's calling of Turnbull, it is sufficient for present purposes, to note that the salient features of his testimony were as follows: (1) he had to concede, like Gregory, that the

fracture occurred in two stages (965), but, (2) in sharp contradistinction to Gregory, Turnbull was of the opinion that both stages were caused by impact (997). It will be remembered that Gregory was unable to ascertain the cause of the first stage, could not preclude Professor Gordon's explanation of fatigue as being such a cause (Gregory, 116), and had found that the "Part was running cracked" (Exhibit 148) (emphasis added).

However, when it came to describing the source of the impact which Turnbull alleged as a cause of the first stage of the fracture, he suddenly recognized his own limitations and professed an inability to undertake that particular task. As he put it: "It is out of my field, sir" (1033), and "No, sir. I am not a mechanical engineer. It is out of my expertise. My expertise is in the observation of the failed part" (1035).

Thus, Chrysler could not solve its dilemma with respect to the cause of the first-stage fracture through Turnbull. To say that the cause was "impact" would not suffice. Impact "in the air", without convincing scientific testimony tying the source of that impact to a specific event in the course of the vehicle, would never carry the day against Professor Gordon's fatigue explanation, coupled with Gregory's admissions. Everyone in the courtroom knew that the vehicle had sustained impact during its ultimate collision with the tree, but, because of the admissions of Gregory and Turnbull that this was a two-stage fracture, Chrysler still needed a source of impact prior to that tree.

And whom did Chrysler utilize as the vehicle for this crucial proof as to the source of the alleged first-stage impact fracture? To have called Gregory would, of course, have been suicide. Did

Chrysler call another metallurgist or mechanical engineer from its own extensive department of fracture and failure analysis? Absolutely not. The vehicle for this crucial proof chosen by Chrysler was none other than the veritable jack-of-all-trades, Mr. Sylvester Mazur.

Mr. Mazur's education ended upon his graduation from Cass Tech in Detroit (783). Although he once took a course in mathematics (782), Mr. Mazur never received any formal engineering or metallurgical training (706). Mr. Mazur, on the other hand, is clothed with the job title of "Product Engineer" by TRW (701).

Although Mazur's office in Warren, Michigan is located only 15 miles from Chrysler's metallurgical laboratory in Highland Park, neither Gregory nor any of the other metallurgists or engineers on Chrysler's staff ever consulted Mazur with respect to their fracture and accident analysis (784-85). Mazur never examined the fractured pieces or the rest of the steering assembly himself (783), and never requested an opportunity to make such an examination (785). Quite astonishingly, Mazur did not know whether or not TRW's own metallurgists had ever studied the fractured pieces (785). In fact, they had not.

In spite of all of the above, Mazur launched into a lengthy stream of opinion testimony, covering everything from the measurement of actual distances based on the observation of photographs (717-736) to the reconstruction of accidents from the evidence of skid marks left in the roadway (710-717; 737-38; but see 895-98 & 903). Without even batting an eye, Mazur moved on from photographs and skid marks and launched into a broad brush treatment of a subject heavily laden with questions of immense engineering and metallurgical importance, even though he had no knowledge with respect to these subjects at

the time his deposition was taken (833). Mazur proceeded to describe tests he had never witnessed or supervised, and began to analyze the forces that flowed through the Weiss automobile on that fateful day, even though Moseley, and even Turnbull, had refused to perform this analysis on the grounds that they were not mechanical engineers (Moseley, 362 & 436; Turnbull, 1033 & 1035).

This is where, we submit, the trial Court committed an error of drastic significance. Mazur's testimony contending that the first stage of the fracture was caused by impact should never have been allowed in, in view of Chrysler's non-revealing interrogatory answers and the Court's own rulings in September and November of 1972 and on February 7, 1973 (see pp. 20-26 supra).

Once in, the plaintiff should have been allowed to rebut this testimony with an established expert, Professor Dennis Rader of Yale University, as will be discussed in Point II, below. In denying plaintiff this rebuttal opportunity, the Court committed an even more grievous error on this, the most crucial issue in the case - an issue which Chrysler had to hurdle in order to have any chance of success. The issue was so crucial that, had Chrysler failed to develop an alternative to fatigue as the explanation for the cause of the first stage of the fracture, we submit that plaintiff would have been entitled to a directed verdict. In order to understand the magnitude of the Court's error in this regard, Mazur's testimony must be analyzed in some detail.

As mentioned above, plaintiff commenced the trial unenlightened as to Chrysler's theory regarding the origin of the first-stage fracture. The last information from Chrysler came during the February 7, 1973 hearing on plaintiff's motion to strike Chrysler's

answer, when Chrysler's counsel represented to the Court that the first stage of the fracture occurred prior to November 14, 1964, and most probably was caused by the Elfers accident in August of that year (see pp. 23-24 supra).

Moseley had testified that during the 69 feet which the vehicle traversed as it headed off the road towards its deadly impact with the tree, the right front wheel ran over a stump that had been cut close to the ground and protruded no more than one inch from the surface of the surrounding soil (277, 374). This stump was located approximately 27 feet from the impact tree (372, 518). It was this stump that Chrysler now picked as the point at which it would claim that the first stage of the two-stage fracture occurred. Mazur was selected to be the spokesman for this startling theory.

After the accident had occurred, the right front wheel rim was found to have been dented on its outboard side. The dent is visible in Exhibit AX (36), wherein the rim is incorrectly labeled "LF Wheel". Mr. Moseley had testified that a possible source of this dent was the above-described stump over which the right front wheel had traveled (416-17). Of course, another possible source of the dent was the final impact with the tree itself. But Chrysler pounced upon the tree stump possibility and announced its contention, through Mazur, that the first stage of the Pitman arm stud fracture was impact-induced and was caused when the right front wheel traversed this one-inch stump. Now, on March 8, 1973, seventeen days after the commencement of the trial, Chrysler had finally revealed its crucial alternative to fatigue as the cause of the first-stage fracture.

Mazur proceeded as follows: he said that at TRW, tests are regularly run with respect to the poundage required to "fail" certain parts (745). In the case of a Pitman arm stud, Mazur claimed that

these tests had shown that a force of 4,560 pounds was all that was required to "fail" a perfectly good, soundly manufactured, stud (745-46). By "fail", Mazur meant that the stated poundage would be sufficient to bend the stud (746-47). Then, without more, Mazur was handed Exhibit AX (the photo of the right rim dent), was asked the following question and gave the indicated response:

"Q. Now, Mr. Mazur. . . I show you the photograph AX in evidence. . . and I ask you: do you have an opinion, with a reasonable amount of engineering certainty, whether the load that has been applied to the rim shown in those pictures so as to result in the deformation that you see here of that rim is a sufficient load to fracture a Pitman stud?"

A. I would say without a doubt it would be."
(750) (emphasis added).

That was it! Without further explanation, this vocational school graduate had proceeded to visually assess the degree of dent in the right front wheel rim and had categorically pronounced it sufficient to fracture a sound Pitman arm stud, even though the "test" which formed the premise for his conclusion related to bending. We will discuss the distinction below.

Plaintiff's counsel had already objected, on general grounds, to the competence of Mazur to offer the opinions he was so causally rendering in a whole host of unrelated areas (731). The objection was overruled (731-32). Thus, a man without an engineering degree, clothed in the apparently impressive title of "Product Engineer", was allowed to spew forth specious theory after specious theory, much to the prejudice of plaintiff.

However, Mazur's first stage fracture theory was inadmissible for even more important reasons. Mazur's theory constituted an alleged "cause" of the accident, information as to which had been

requested in interrogatory 3(a), (see p. 21 supra), which interrogatory Chrysler had been required to answer and up-date, pursuant to the Court's order of February 7, 1973. This directive was not complied with, and Mazur had nothing to say about his "theory" during the taking of his deposition (833). Most importantly, plaintiff's interrogatories 45, 46 and 58 (15-16, 19) asked for the results and conclusions of any tests conducted by Chrysler or on its behalf. Chrysler's answers of May 12, 1971 (23) made no reference to these regularly run TRW "failure" tests, and, in fact, Mazur's name was not even mentioned therein. As set forth above on pages 25-26 Judge Griesa had specifically directed Chrysler that "you are under an obligation to amend your answer to Interrogatory 46. . . . And it is true, undoubtedly, of other interrogatories." (75). The interrogatories were never amended, and Mazur did not refer to these "tests" during the taking of his deposition. Mazur's "tests", theory, and conclusions came as a complete surprise to plaintiff and should never have been allowed into evidence.

Furthermore, Chrysler never submitted any evidence that Mazur had conducted, supervised, or witnessed the "bending test", or any of the other "tests" as to which he also testified. In fact, with respect to another "cycle" test explained by Mazur, it was developed on cross-examination that he never witnessed or supervised the test, but merely was repeating findings given to him by a Mr. Parrott (859). It was at this point that plaintiff's counsel announced that he would make a motion to strike all of Mazur's testimony on various grounds (860). It had now become obvious that Mazur's testimony regarding his so-called "tests" was rank hearsay, and clearly inadmissible.

Thereafter, in Chambers, plaintiff's counsel argued that Mazur's testimony was inadmissible, not only because of the hearsay element,

but also because of Chrysler's failure to answer the relevant interrogatories (865). Without explanation, the Court completely ignored the argument based upon the failure to answer interrogatories, thereby, in effect, rendering its own pre-trial order of February 7, 1973 a nullity.

It is submitted that this action by the trial Court, in and of itself, constituted reversible error, an error which worked disastrously to the prejudice of the plaintiff. As will be pointed out below, the "bending tests", and the conclusions that were derived from it, were based on wholly fallacious premises and reasoning. If, during the pre-trial discovery, plaintiff had received the information she was entitled to receive respecting this test and had been advised of Chrysler's contention that the impact which caused the rim dent had caused a fracture of the Pitman arm stud, plaintiff's counsel could have adequately prepared to expose this "expert testimony" as a complete fraud. As it turned out, plaintiff was completely surprised, and was deprived of the advance notice which is so essential to the preparation of efficient cross-examination with respect to scientific testimony.

Before the 1970 revision to the Federal Rules of Civil Procedure, those rules did not make provision for the discovery of information held by opposing expert witnesses. However, as Professor Moore has noted in his treatise on the Federal Rules:

"By 1967, when the preliminary draft of what was to become the amended discovery rules of 1970 was circulated, there was a marked trend toward recognition of the fact that when an expert witness is to be put on at the trial effective cross-examination requires advance information as to his identity and the substance of his testimony."
4 Moores, Federal Practice ¶26.66[1], p. 26-479.

In 1963, District Judge Winter made the following observation:

"It is to be noted. . . that one of the express uses of depositions is that of cross-examination, Rule 26(d)(1), and it needs no citation of authority to say that an expert is the most difficult witness to cross-examine, particularly if one is unaware until trial of the substance of his testimony."
United States v. 23.76 Acres of Land, etc., 32 F.R.D. 593, 596 (D. Md. 1963).

There can be no doubt but that the above-expressed sentiments were behind the revision to Rule 26, which now, in sub-section (b)(4), allows for "discovery of facts known and opinions held by experts." The Advisory Committee Note of 1970 with respect to sub-division (b) reads , in relevant part, as follows:

"Subsection (b)(4)(A) deals with discovery of information obtained by or through experts who will be called as witnesses at trial. The provision is responsive to problems suggested by a relatively recent line of authorities. Many of these cases present intricate and difficult issues as to which expert testimony is likely to be determinative. . . . In cases of this character, a prohibition against discovery of information held by expert witnesses produces in acute form the very evils that discovery has been created to prevent. Effective cross-examination of an expert witness requires advance preparation. The lawyer even with the help of his own experts frequently cannot anticipate the particular approach his adversary's expert will take or the data on which he will base his judgment on the stand. . . . Similarly, effective rebuttal requires advance knowledge of the line of testimony of the other side. If the latter is foreclosed by a rule against discovery, then the narrowing of issues and elimination of surprise which discovery normally produces are frustrated."

"These considerations appear to account for the broadening of discovery against experts in the cases cited where expert testimony was central to the case. In some instances, the opinions are explicit in relating expanded discovery to improved cross-examination and rebuttal at trial. Franks v. National Dairy Products Corp., 41 F.R.D. 234 (W.D. Tex. 1966); United States v. 23.76 Acres, 32 F.R.D. 593 (D. Md. 1963); see also an unpublished opinion of Judge Hincks, quoted in United States v. 48 Jars, etc., 23 F.R.D. 192, 198 (D.D.C. 1958)."

4 Moore's Federal Practice ¶26.01 [18], pp. 26-50 to 26-51 (emphasis added).

Perhaps the best exposition of the considerations which require pre-trial discovery of information known to experts was set forth in the unpublished opinion of District Judge Hincks, also referred to in the Advisory Committee Note and quoted in United States v. 48 Jars, etc., 23 F.R.D. 192, 198 (D.D.C. 1958), to wit:

"Having in mind that the field in question here is one of scientific controversy wherein without prior discovery cross-examination cannot be expected successfully to perform its historic function, and effective evidence in rebuttal, though perhaps in existence, cannot be produced forthwith upon the close of the claimant's defense, I feel that here there is sufficient showing of necessity, within the rule of Hickman v. Taylor [329 U.S. 495, 67 S. Ct. 385, 91 L.Ed. 451] if applicable here, to allow the discovery to proceed." (emphasis added).

See also Franks v. National Dairy Products Corp., 41 F.R.D. 234, 237 (W.D. Tex. 1966), a products liability case wherein the same considerations were controlling.

It is most significant to note, at this juncture, that the above authorities contemplate the use of discovery regarding expert information precisely for the purpose of preparing an effective rebuttal case. Not only was plaintiff deprived of this crucial advance notice by Chrysler's default in answering interrogatories, but, as will be pointed out below in Point II, this damage was enormously compounded when the trial Court tragically excluded from plaintiff's rebuttal case the laboratory experiments, conducted by Professor Dennis Rader of Yale University, which experiments conclusively demonstrated that the force required to produce the observable rim dent in Exhibit AX (36) would be less than 28 percent of the force necessary to fracture a properly manufactured Pitman arm stud.

Of course, if plaintiff had received the advance notice to which she was entitled, Professor Rader's experiments could have been performed before Chrysler commenced its defense, and the cross-examination

of Mazur, we submit, would have been of a devastating sort. Even without Rader's experiments, advance notice would have afforded plaintiff's attorneys the opportunity to consult with their experts in order to develop effective cross-examination.

As it turns out, Mazur's theory was simply absurd for a number of reasons. But because of the surprise involved, and the pace at which the trial was moving at this point, it was virtually impossible for plaintiff's attorney to illustrate adequately these falsities when he was called upon to examine Mr. Mazur.

The most incredible deficit in Mazur's theory lay in the fact that he had conducted absolutely no tests to ascertain the amount of force which would be generated in the steering system by a jolt sufficient to produce the dent shown in Exhibit AX. Thus, even if his premise of 4,560 pounds to "fail" a sound Pitman arm stud were valid, how could he know that the rim dent in question on the right front wheel would produce that amount of force at the site of the Pitman arm stud, located over on the left-hand side of the steering assembly? He merely took a look at Exhibit AX and stated that the dent would suffice (see p. 34, supra).

Furthermore, this theory completely ignored the proven fact that none of the other studs in the steering linkage were found to be in fracture, including the ones which were located between the right front wheel and the Pitman arm stud. (See Exhibit 180)(50). Of course, Mazur was not qualified to assess these factors, nor most of the other ones as to which he testified, inasmuch as he had no metallurgical or engineering training. It should be noted that when Turnbull was asked how an impact fracture caused by a force emanating from the right wheel could be consistent with the above set of facts, he at least had the candor to admit that his lack of engineering

qualifications prevented him from responding (1033, 1035).

Mazur's theory as to the first stage of the fracture was erroneous for additional reasons. As mentioned above, Mazur's premise was that the standard TRW test demonstrated that a load of only 4,560 pounds was required to "fail" a sound Pitman arm stud. The Court immediately recognized the problem with this word "fail", and asked the following questions:

"THE COURT: I am sorry. When you gave the 4,560 pound figure which would cause a Pitman stud to fail, what did you mean by 'fail'? Bend? Break? Shear?

THE WITNESS: Bend to the point where it wouldn't hold a load. You are applying a load to it and the load is increasing to some point. In this case it increased up to 4,560 pounds, and then it would no longer hold. It would start going down."

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"THE COURT: That indicator goes up to 4,560 pounds, and then what happens?

THE WITNESS: The stud bends down."
(746-47) (emphasis added).

Thus, "fail" really meant "bend down", which is quite a different thing from breaking or fracturing. Anyone who has ever toyed with a paper clip knows that the force required to bend it over is vastly different from the force that would be needed to immediately break it or shear it in two. And yet, Mazur's ultimate opinion, when stated, was to the effect that the force sufficient to produce the observable rim dent would be enough to fracture (not bend) a sound stud (see testimony quoted at p. 34, supra). Therefore, the premise did not support the conclusion, and Mazur's opinion was inherently improper and inadmissible.

There can be no doubt but that plaintiff was entitled to advance notice of Mazur's theory and TRW's standard "bending" test, pursuant

to interrogatories 3(a), 45, 46, 50-52 and 58. Plaintiff's entitlement to this information was made explicit by the Court's order of February 7, 1973 (73-76). It will be remembered that this order arose out of plaintiff's motion to strike the answer of Chrysler because of its non-responsive answers to these very interrogatories. The facts, including Chrysler's prior defaults, weighed heavily on the side of granting of plaintiff's motion (see pp. 20-23, supra).

In light of these facts, the legal authorities were overwhelmingly in favor of plaintiff's February 7, 1973 motion to strike Chrysler's answer; e.g. Shepard v. General Motors Corporation, 42 F.R.D. 425, 426 (D.N.H. 1967), aff'd, 423 F.2d 406, 407 (1st Cir. 1970); Jones v. Uris Sales Corporation, 373 F.2d 644 (2nd Cir. 1967); Bourgeois v. El Paso Natural Gas Company, 20 F.R.D. 358 (S.D.N.Y. 1957), aff'd, 257 F.2d 807 (2nd Cir. 1958); Cozier v. American Airlines, Inc., 25 F.R.D. 268, 269 (S.D.N.Y. 1960); Fond Du Lac Plaza, Inc. v. Reid, 47 F.R.D. 221, 222 (E.D. Wisc. 1969); Hastings v. Maritime Overseas Corp., 411 F.2d 1201 (3rd Cir. 1969); United States v. Continental Casualty Co., 303 F.2d 91 (4th Cir. 1962); United States v. 3963 Bottles, More or Less, etc., 265 F.2d 332 (7th Cir. 1959), cert. denied, 360 U.S. 931; Mangano v. American Radiator & Standard San. Corp., 438 F.2d 1187 (3rd Cir. 1971).

Judge Griesa was initially inclined to preclude Chrysler from "putting in any evidence on the trial as to fractures" (page 23, supra), and relented in this determination only after specifically ruling that Chrysler was obliged to amend its answers to interrogatories 3, 46 and all the "other interrogatories" if Chrysler possessed, or did acquire, any "information" or "conclusions" which differed from what had already been revealed (see pp. 25-26 supra). The Court

certainly possessed the authority to make this ruling pursuant to Rule 26(e)(3). But, we submit, the trial Court was not entitled to deny plaintiff's motion to strike on these explicit terms, and then ignore its own order when the provisions of such order were ultimately violated. If it was not error to fail to grant plaintiff's February 7, 1973 motion to strike Chrysler's answers, it became error, and highly prejudicial error, not to strike Mazur's trial testimony when the specific ruling of February 7, 1973 had been clearly violated.

POINT II

PLAINTIFF'S VITAL REBUTTAL TESTIMONY WAS ERRONEOUSLY EXCLUDED BY THE TRIAL COURT

Mazur's testimony, improper as it was, had been allowed in. Plaintiff's fundamental right of cross-examination had been prejudiced by Chrysler's dereliction in not revealing its theories, findings, conclusions and opinions in advance, pursuant to the Court's directive of February 7, 1973. Chrysler had been allowed to "solve" its two-stage dilemma by surprising plaintiff with a specific impact event (the stump) as an alternative to fatigue as the cause of the first stage of the now conceded two-stage fracture. This theory had been introduced through the conduit of an employee of TRW who had neither engineering nor metallurgical training.

But plaintiff still had a remedy. After consulting with their experts, plaintiff's attorneys realized that Mazur's theory could be proven fallacious by a simple, easily demonstrable, laboratory test presented on rebuttal. Such a test, we were advised, would conclusively show that the force required to produce the rim dent in Exhibit AX (36) could not even approximate the force required to fracture a sound Pitman arm stud. Professor Dennis Rader of Yale

University, an expert in the mechanics of deformable solids, with a Ph.D. in engineering mechanics from Brown University (1982-85), was asked to perform the test. We needed an exact duplicate of the wheel rim in question, and thus we scoured the City, purchasing literally the last such rim available in Manhattan at a small shop on the West Side. Then it was up to Yale over the weekend, bringing with us the rim, a sound Pitman arm stud, and diagrams of the steering assembly.

Professor Rader expeditiously performed his tests the next week. By analyzing the stud, its dimensions and composition, Professor Rader calculated that the force required to fracture that stud (not bend it) would be 48,000 pounds per square inch. The force necessary to create the observable rim dent shown in Exhibit AX was determined by producing an identical dent in the new rim through the use of a laboratory press. The force required to produce this rim dent, when transmitted to the site of the Pitman arm stud over on the left-hand side of the steering assembly, was 13,333 pounds per square inch. Thus, according to Professor Rader, the event which produced the rim dent generated less than 28 percent of the 48,000 pounds per square inch force necessary to fracture a sound Pitman arm stud, and it is unquestioned that the Weiss car was found to have a fractured, not merely bent, Pitman arm stud (see Exhibits 187 (51) and AU (35)).

Professor Rader was called as plaintiff's first rebuttal witness on March 20, 1973. His qualifications as an expert were stated in summary fashion in order to save time. They will not be repeated here, but suffice it to say that his list of theses, papers, publications and memberships was quite impressive (1982-85).

After some preliminary questioning, Professor Rader was asked to assume the following:

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"There has been testimony, I want you to assume, Professor Rader, with respect to Exhibit 47 in evidence [also Exhibit AX], of a wheel rim; that the dent or deformation shown in this wheel rim was of a - that if the wheel rim received the type of force on the right side that would cause this degree of deformation to the right wheel rim, that degree of force would be competent to cause a fracture of a sound Pitman arm pin in the car." (1113-14).

That was as far as Professor Rader's crucial rebuttal with respect to the wheel rim was allowed to proceed. Judge Griesa refused to permit any testimony bottomed upon laboratory experiments, or otherwise, in rebuttal to Mazur's theory. And the Court's reason for this, we respectfully submit, was completely without foundation in fact or law. The Court stated that the plaintiff's witness, Mr. Moseley of all people, had been the first to propound and advocate Mazur's impact theory with respect to the first-stage fracture. As the Court put it:

"THE COURT: I am as clear on this as a bell; there is no question about it. It was highlighted in my mind. Mr. Moseley said that the impact of that wheel on that rim would be enough to fracture the Pitman arm. There is no question about it." (1115) (emphasis added).

As will be pointed out immediately below, the Court's recollection of Moseley's testimony was completely at odds with what Moseley actually said. But based upon its erroneous recollection that Mazur's impact theory was first introduced on the plaintiff's direct case, the Court reasoned that plaintiff could not "again" present evidence with respect to that theory on rebuttal. Plaintiff's counsel protested vigorously, pointing out that the impact alternative to fatigue as the cause of the first stage of the fracture was part of Chrysler's defense, and could hardly be construed as a theory which plaintiff would have ever advocated. Plaintiff's counsel precisely explained the nature of Professor Rader's proposed testimony, but the Court replied:

"THE COURT: No. I understand your offer of proof. I will not permit it under any circumstances in the case. Go to the next subject." (1117).

There are several respects in which the Court's recollection of Moseley's testimony was faulty. In the first place, Moseley's testimony in this area did not occur during direct examination, but rather on cross-examination. Although he had testified that the vehicle was clearly in steering failure before it left the road, he began on cross-examination by stating unequivocally that he had no opinion as to the specific cause of that steering failure (361), inasmuch as he is neither an engineer or a metallurgist (362). It will be remembered that Moseley found the left tie rod stud to have been pulled out of its housing by the forces generated during the accident (see p. 10, supra).(Also 447-448). Precisely because of the steering failure which had already occurred, Moseley testified that the front wheels were pulled into a severe right turn by the braking action of the grassy embankment on the right (323, 329), and the wheels remained in this severe right configuration when the right front wheel traveled over the stump (450). Thus, Moseley theorized as follows:

"That the sudden motion of the right front wheel in contacting the stump exerted a pull on the steering link which separated from the tie rod fitting for the left front wheel." (420) (emphasis added).

Moseley was quick to add, however, that the action of the right front wheel in traversing the stump was not the "whole story" with respect to the pulling of the left tie rod stud out of its housing (427), because, of course, such a separation could never have occurred if the wheels had not been in a severe right turn due to the pre-existing steering failure.

But Chrysler's counsel pressed further. He wanted to know how much force had been required to effect the tie rod separation. However, Moseley had already stated that he possessed no engineering expertise, and responded simply as follows: "I have no such number." (436 & 438).

Undaunted by Moseley's protestations, Chrysler's counsel was allowed to continue on this line of questioning, over objection:

"Q. And I want you to make the same assumption I gave you before, and assuming those forces are sufficient to cause a failure to the tie rod stud, in your opinion would those forces be sufficient to also cause a failure to the Pitman stud located three inches away?

A. If I qualify my answer: I do not know the numbers in it, I would rather speak in terms of probability instead of certainty."

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"A. . . . If the forces that are generated throughout this linkage are sufficient to separate the tie rod stud, would those forces be sufficient to cause a failure to the Pitman stud?

A. I would say yes, but I would like to qualify what I mean by this, if I may.

Q. You have given us the answer, really, and I think the answer would be self-evident anyway.

MR. FRIEDMAN: Your Honor, at some point I have to ask Mr. Schwab to stop this behavior.

THE COURT: I will strike that."
(438-39) (emphasis added).

Of course, Mr. Moseley was never given an opportunity to explain on cross-examination. But even focusing on his testimony up to this point, it is clear that the Court's later recollection of that testimony was inaccurate. Contrary to what the Court thought, Moseley never made any statement regarding the amount of force capable of denting the wheel rim, or the capacity of this force to fracture the Pitman arm stud. Separation, not only fracture, constitutes "failure",

since the stud is then non-functional, but it takes far more force to fracture a stud than to separate it from its housing (see Rader's experiment results, supra at p. 43 and Mazur, 764).

The theory that the rim dent impact involved sufficient force to cause stud fracture made its first appearance in the case with Mazur (see page 34, supra). Moseley's testimony had not dealt with the wheel rim at all, but had focused on the tie rod separation. And, most importantly, Moseley testified that this separation could never have occurred unless the front wheels were in a severe right turn due to a steering failure that had already occurred.

Mazur's testimony was completely different in nature and implication. He started with the rim dent, traced the force along to the Pitman arm stud, and pronounced it sufficient to fracture that stud. No one before Mazur had the audacity to endorse this particular theory, and it was this theory that Rader's laboratory test rebutted fully and demonstrably.

On redirect, Moseley was finally afforded an opportunity to amplify the partial explanation to which he had been limited on cross-examination. But here, we submit, the Court made one of its most paradoxical rulings. On cross-examination, Chrysler's counsel had been allowed to extract engineering opinions from Moseley, over objection, and in spite of his obvious lack of expertise in the area. However, when it came time for Moseley's explanation on redirect, the Court restricted him to "findings" (520), and "physical observations" (523). Thus, Chrysler had it both ways. It was allowed to obtain a partially explained, and thus misleading, "opinion" from Moseley on cross-examination, and then was successful in limiting his full explanation to "findings and observations".

But plaintiff's counsel proceeded with Moseley, restricted as he was, and it soon became clear that Moseley's cross-examination testimony with respect to a "failure" of the Pitman arm stud had referred, not to a fracture, as the Court erroneously recalled (see p. 44, supra), but rather to a "pulling out" of the stud from its housing (520-21). Moseley's point was this: when the tie rod stud had been pulled out of its housing, the force had been exerted in a lateral fashion, and this left an "ovate lip" and a "peaning effect" on the tie rod where the stud had emerged (520 & 523-24). Thus, as Moseley put it:

"What I am saying is we have no comparable evidence on the surface of the opening in the Pitman arm or on the part of the pin which fitted down into the fractured surface. Both of these should have shown some peening or changing in the contour of the metal if they had failed in the same moment of overload [as when the tie rod stud failed]." (522-23; see also 526-27).

All this was pointed out to the Court in a Chambers conference during a recess on the day Professor Rader testified (1128-35), but to no avail. The Court continued to assert that plaintiff's direct case, through Moseley, had included proof that the one-inch stump could fracture a sound Pitman arm stud, and thus Professor Rader's testimony was held to be improper rebuttal. This, we submit, was an error of disastrous consequence for the plaintiff.

The Court's ruling had no foundation in the law. Even if one assumes for the moment that the Court's recollection of Moseley's testimony was correct, and that the totality of his testimony, on direct and cross, gave rise to an inference that the rim dent was evidence of sufficient force to fracture a sound Pitman arm stud, plaintiff should still have been allowed to introduce Professor Rader's laboratory test precisely because such an adverse inference arose on

her own case in chief. Plaintiff's right to introduce Professor Rader's evidence would have existed even if Mazur had not offered his own specious theory.

Patton v. Baltimore & O. R. Co., 120 F. Supp. 659 (W.D. Pa. 1953), aff'd, 214 F.2d 219 (3rd Cir. 1954), is a personal injury case closely in point. The relevant facts in Patton were simple. Plaintiff's decedent was killed while he was repairing a string of the defendant's freight cars. The accident occurred when several gondola cars belonging to the defendant ran away from the place where they were being unloaded by employees of an independent slag company. The gondola cars collided with the line of cars upon which the decedent was working, thereby causing his death. Plaintiff's witnesses testified that the brakes on the runaway gondola cars were deficient. On cross-examination, defendant's counsel attempted to develop the theory that the slag company's use of a clam shell bucket to unload coal from the gondola cars caused vibrations which released the brakes on those cars.

On rebuttal, plaintiff called a coal unloading foreman to testify as to the use of a vibrator in unloading coal from hopper cars. The defendant objected but was overruled. The jury found for the plaintiff, and the defendant moved for judgment n.o.v. and/or a new trial, assigning as error the allowance of plaintiff's rebuttal testimony. The Court disposed of this argument rather expeditiously:

"The testimony regarding the vibrator was admissible to rebut the inference brought out by counsel for the railroad in his cross-examination that the slag company's method of unloading the cars with a clam shell bucket made them vibrate so much that the brakes were released. See Moreau v. Pennsylvania R. Co., 3 Cir., 1948, 166 F.2d 543, 545." (120 F. Supp. at 664) (emphasis added).

A plaintiff has an absolute right to rebut proof that arises on the defendant's case. A failure to allow such rebuttal constitutes reversible error. The case of Worcester v. Pure Torpedo Co., 127 F.2d 945 (7th Cir. 1942) is in point. Worcester was an action brought by the plaintiff to recover damages allegedly caused by the negligence of defendant in "shooting plaintiff's oil well with nitro-glycerine". Judgment was entered upon a verdict for the defendant, and plaintiff appealed. The Court of Appeals aptly summarized the relevant issue and its ruling as follows:

"It appears that over objection defendant proved that some two months after the premature explosion of June 6, the plaintiffs hired Mendenhall [defendant's employee] to shoot the well a second time, but the court would not permit plaintiffs to show [on rebuttal] explanatory facts and circumstances concerning the rehiring and the condition existing at the second shooting."

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"In the instant case, the admission of Mendenhall's testimony resulted from counsel's persistence in questioning Mendenhall after the court had indicated that such testimony was inadmissible. That fact and the fact that the court would not permit plaintiffs [on rebuttal] to show explanatory facts and circumstances concerning the rehiring and the condition existing at the second shooting, raises the question whether we can say that it affirmatively appears from the whole record that the court's rulings were not prejudicial to the plaintiffs' cause. Since we cannot be certain that the rulings did not, it must be presumed that reversible error was committed. Farris v. Interstate Circuit, 5 Cir. 116 F.2d 409, 412 and Fort Dodge Hotel Co. v. Bartelt, 8 Cir. 119 F.2d 253, 259." (127 F.2d at 947-48) (emphasis added).

Worcester is remarkably similar to the instant case, wherein the trial Court kept away from the jury Professor Rader's rebuttal to the inadmissible testimony of Mazur. However, the instant case is a stronger candidate for reversal in at least one respect - whereas the Court in Worcester reversed because it could not be certain that the erroneous rulings did not prejudice the plaintiff,

it is clear here that the exclusion of Professor Rader's testimony, which decimated Chrysler's - Mazur's unfounded impact alternative to fatigue, was central to the ultimate success of Chrysler. For if plaintiff had been allowed to destroy the viability of Mazur's impact theory with Professor Rader's simple, demonstrative test, the jury would have been left with Professor Gordon's findings of a fatigue-caused fracture and Gregory's inability to preclude the same, together with Gregory's admission that the "Park was running cracked" (Exhibit 124) (41).

In the Chambers conference during trial described above, where plaintiff's counsel pressed for a reconsideration of the Rader ruling, Judge Griesa made much of the fact that the "subject" of a Pitman arm stud failure had been "raised at this early stage of the trial" during the cross-examination of Mr. Moseley (1131-32). But this was of no legal consequence with respect to plaintiff's absolute right to rebut Mazur, even assuming again for the moment that Moseley and Mazur were talking about the same thing. The fact that a particular subject is touched upon during cross-examination on the plaintiff's case is immaterial with respect to the plaintiff's right of rebuttal.

A perfect illustration of this rule is provided by Stanley v. Beckham, 153 F. 152 (8th Cir. 1907). The plaintiff therein sued to recover from the defendant the reasonable value of brokerage services alleged to have been rendered at the latter's request. The verdict and judgment were for the defendant, and the plaintiff assigned as error the exclusion of his own rebuttal testimony. While the plaintiff had been on the stand during his own case-in-chief, he was cross-examined with respect to the substance of a certain conversation he had with the defendant. After the plaintiff rested, both the defendant and another witness testified at length with respect to their version

of the same conversation. On rebuttal, the plaintiff again took the stand and attempted to provide a full account of his recollection as to the conversation in question. This was excluded, on the grounds that "he [the plaintiff] went over that yesterday fully" (153 F. at 154). The Court of Appeals reversed, holding as follows:

"Error is assigned upon the rulings preventing the plaintiff from giving in rebuttal his version of the conversation mentioned, and we entertain no doubt that in this there was error, for, where the whole or part of a conversation is put in evidence by one party, the other party is entitled to explain, vary, or contradict it. . . . [citations omitted]. And it is immaterial that upon the prior cross-examination the plaintiff had been interrogated respecting some particular phases of the conversation, for, as it had not been made, and was not necessarily, part of his case in chief, he was entitled in rebuttal to give his version of it and to go into every phase of it having any tendency to show that the defendant's version was not the correct one." (153 F. at 154) (emphasis added).

Stanley makes the basic point which, we submit, Judge Griesa overlooked - evidence which is elicited from the plaintiff's witnesses during cross-examination does not become part of plaintiff's case in chief, thereby operating to restrict plaintiff's right of rebuttal. The very fact that plaintiff would seek to rebut defendant's later "corroboration" of such evidence (assuming, again that Moseley and Mazur were saying the same thing) indicates that the plaintiff hardly espoused that evidence. Thus, it makes no sense to characterize such cross-examination testimony as being part of the plaintiff's case.

As the Chambers conference with respect to the offer of Professor Rader's laboratory evidence proceeded, and a reading of Mr. Moseley's testimony made it clear that he had not embraced the Mazur theory, but, on the contrary, had done quite the opposite, the Court developed a variant to its justification of the exclusion ruling. The Court stated:

"However, let us assume for purposes of argument that there is some distinction that you draw between the Moseley testimony and something you said was not quite covered. My point is that the basic subject was presented. . . . But let us assume there was an area he didn't quite come to, the time for you to do that in my mind was on the redirect of Moseley, or with another witness on your case in chief." (1134).

This reasoning, we submit, was faulty. In the first place, plaintiff could not have developed anticipatory rebuttal of Mazur through redirect of Moseley because Moseley was not an engineer and was, therefore, not qualified to undertake that task. Besides, during the redirect examination of Mr. Moseley, the Court took sudden cognizance of the limits to Moseley's expertise, and only allowed testimony as to his "findings" and "observations" (although the Court failed to set the same limits upon defendant's cross-examination) (see p. 47, supra). Obviously, plaintiff did as much with Moseley on redirect in the way of clarification as the Court would allow.

Moreover and most significantly, even if Chrysler's cross-examination of Moseley can be said to have constituted an advance "hint" as to the defense Chrysler would ultimately present through Mazur, this hardly provided enough of a basis to justify a presentation of Professor Rader's type of laboratory experiment on plaintiff's case in chief. Plaintiff was entitled to wait until Chrysler's theory was laid out with specificity so that it could be known precisely what had to be rebutted. As has been shown, Chrysler, in violation of the Court's pre-trial orders, had concealed the Mazur rim dent-stump impact theory as the cause for the first fracture stage until its own direct case.

Furthermore, it has been stated over and over again that, as a matter of law, a plaintiff has no legal duty to anticipate defenses

on his direct case. National Surety Corporation v. Heinbokel, 154 F.2d 266, 268 (3rd Cir. 1946); Lord & Taylor v. Yale & Towne Mfg. Co., 230 N.Y. 132, 140 (1920). Plaintiff's duty is only to make a prima facie showing of defendant's responsibility. As the New York Court of Appeals has stated:

"Plaintiffs' evidence is deemed sufficient to make out a prima facie case if it shows facts and conditions from which the negligence of the defendant and the causation of the accident by the negligence may be reasonably inferred. (Dillon v. Rockaway Beach Hosp. & Dispensary, 284 N.Y. 176, 30 N.E.2d 373; Ingersoll v. Liberty Bank of Buffalo, 278 N.Y. 1, 14 N.E.2d 828)."

Wragge v. Lizza Asphalt Construction Co., 17 N.Y.2d 313, 320 (1966).

To the same effect is Spett v. President Monroe Bldg. & Mfg. Corp., 19 N.Y.2d 203, 205 (1967). The plaintiff's duty in this regard is especially light in a products liability case, such as the instant one. In order to carry her ultimate burden of proof herein, the plaintiff had no duty to demonstrate precisely what went wrong with the steering mechanism. It was sufficient if the surrounding circumstances, including the pattern of the accident and the manner in which it occurred, supported the conclusion that there was a manufacturing defect. Markel v. Spencer, 5 App.Div.2d 400, 171 N.Y.S.2d 770, 775 (4th Dep't 1958), aff'd, 5 N.Y.2d 958 (1959); Chestnut v. Ford Motor Company, 445 F.2d 967, 970-71 (4th Cir. 1971); Dennis v. Ford Motor Company, 332 F. Supp. 901, 903 (W.D. Pa. 1971), aff'd, 471 F.2d 733 (3rd Cir. 1973); Adkins v. Ford Motor Co., 446 F.2d 1105 (6th Cir. 1971); American Motors v. Mosier, 414 F.2d 34 (5th Cir. 1969). The plaintiff's ultimate burden of proof in a products liability case being what it is, the initial burden of coming forward with evidence is particularly minimal. Pearson v. Ehrich, 148 App. Div. 680, 133 N.Y.S. 273 (1st Dep't 1912).

Inasmuch as anticipation of defenses is not required, rebuttal of these defenses is proper and must be allowed, even though the substance of the rebuttal proof might have been germane on the plaintiff's case in chief. Specifically, we submit that Judge Griesa's ruling that "the time for you to do that in my mind was on the re-direct of Moseley, or with another witness on your case in chief" (1134) was contrary to the established authorities.

Perhaps the best exposition of the above rule is contained in National Surety Corporation v. Heinbokel, 154 F.2d 266 (3rd Cir. 1946). The plaintiff therein was a subrogee of a brokerage house which sued defendant for negligence in performing a particular audit. The allegation was that defendant failed to discover and report the theft of certain securities by one Storay, an employee of the brokerage house.

At the trial, Storay conceded his theft and stated that he induced the auditors to remove certain certificates from a security box on the representation that these certificates were needed for the day's deliveries. Storay later dropped those certificates back into the box, and they were thus counted twice by the auditors. The defendant's witnesses emphatically denied that they gave any certificates to Storay. They stated that they compiled a list of certificates needed for each day's deliveries, and then handed the certificates to one Merkel, another employee of the brokerage house. Plaintiff offered on rebuttal to demonstrate, by means of business records, that none of the certificates in question were needed for any day's deliveries. The offer was objected to as not proper rebuttal, and the trial Court sustained the objection. The Court of Appeals held that the exclusion of this rebuttal proof resulted in a "manifest injustice to the

plaintiff" (154 F.2d at 269), and reversed, holding as follows:

"We think the evidence could have been introduced in plaintiff's main case but as said in Schoen v. Elsasser, 315 Pa. 65 at page 68, 172 A. 301, 302: 'Where, however, evidence is real rebuttal evidence, the fact that it might have been offered in chief does not preclude its admission in rebuttal.' 26 P.C.L., §46, pages 1041, 1042; Stetson v. Croskey, 52 Pa. 230. We do not see that plaintiff was bound to anticipate defense proof that Storay did not have possession of the securities after they were listed and so make it impossible, as he claimed, to replace them in the boxes. Therefore when that testimony did come in it became necessary to refute it or at least to render its value doubtful. . . . The rule regarding it is the same in the United States Courts as under Pennsylvania law. . . . In Throckmorton v. Holt, 180 U.S. 552, 21 S. Ct. 474, 45 L.Ed. 663, the proponents of a will offered certain proof as rebuttal evidence on the genuineness of the signature of one of the witnesses to the document. The Trial Judge excluded it as improper rebuttal. The Supreme Court said at page 564 of 180 U.S., at page 479 of 21 S. Ct.:

'We think this evidence was competent in that character, and should have been received. The case in regard to the genuineness of the paper was very closely contested, and was one of the vital points in the trial. Evidence had been given on both sides, and witnesses of the highest character and respectability had differed in regard to the genuineness of the signature. Although the court, when the case was first with the proponents, had notified counsel that they must offer all the evidence they proposed to offer upon the subject before they first rested their case, and in accordance with such decision they had proceeded to give further evidence, we are not able to see how that fact is material at this point. Counsel for the proponents could not anticipate what evidence would be given by their opponents, nor what reasons might be offered by a witness as the ground for an opinion against the genuineness of any signature on the paper.'" (154 F.2d at 268-69) (emphasis added).

Of course, the instant case is a stronger candidate for reversal than either National Surety or Throckmorton (cited therein), inasmuch as the specific point which plaintiff herein desired to rebut was the rim impact theory first proffered by Mazur. Mazur's theory, it will be remembered, was to the effect that the force necessary to dent the wheel rim would also fracture a sound Pitman arm stud.

Plaintiff's case in chief contained no evidence negating this specific proposition and Moseley's testimony dealt only with the possibility of studs being "pulled out" of their housings, but did not treat the subject of fracture or evaluate in any way the force capable of denting the wheel rim.

Also in point is Lord & Taylor v. Vale & Towne Mfg. Co., 230 N.Y. 132 (1920). The plaintiff therein had contracted with defendant to install a coal handling system, a portion of which later fell from its hanger and injured plaintiff's employee. On its case in chief, plaintiff produced evidence that the bolts in the system were poorly secured in many respects, including the alleged fact that the bolts were inverted, with the nuts down. Defendant's witnesses testified, however, that the nuts were placed on top in this system. On rebuttal, plaintiff's expert was told to assume that the nuts were placed on top, and then was asked whether the system would still be safe. This rebuttal was disallowed. The Court of Appeals, speaking through Judge Pound, reversed, reasoning as follows:

"But the theory of the plaintiffs was that, whether the nuts were on top or underneath, some safety device was necessary to prevent them from loosening and working off under vibration. . . . Although this evidence might perhaps have been proper if it had been offered in chief, it was strictly in rebuttal to show that a change in this single detail of the work did not remedy the faulty construction. Plaintiffs were not bound to anticipate that defendant would assert that in one of the several particulars alleged by them to be improper the work was safely bolted. They had no opportunity to meet this bit of evidence until defendant produced it." (230 N.Y. at 140) (emphasis added).

To the same effect is Maguire v. Federal Crop Ins. Corp., 181 F.2d 320, 321 (5th Cir. 1950), Paterson Brewing & Malting Co. v. Mesh & Co., 278 F. 615, 616 (3rd Cir. 1922), Berry v. Littlefield

Alvrod & Co., 296 F. 285, 286 (D.C. Cir. 1924), Meinrenken v. Triple Cities Traction Corporation, 270 App. Div. 784, 59 N.Y.S.2d 323, 324 (3rd Dep't 1946), and Hubbard v. Dow, 264 App. Div. 876, 35 N.Y.S.2d 517, 517-16 (2nd Dep't 1942).

Of course, as we have already pointed out in some detail, plaintiff in the instant case was particularly disabled from anticipating Chrysler's theory regarding the rim dent. Plaintiff had made assiduous attempts to learn of Chrysler's theories and defenses, but these attempts were always frustrated, finally in direct violation of the Court's order of February 7, 1973.

If the Court had granted plaintiff's motion to strike at least to the extent of precluding Chrysler from offering any testimony as to fractures, which it was originally inclined to do (see p. 23, supra), or had disallowed Mazur's testimony on the grounds that the substance of that testimony had not been disclosed in discovery, plaintiff would not have been faced with the necessity of putting Professor Rader on during rebuttal. In this connection, it should be remembered, as pointed out in Point I above, that the discovery revisions of 1970 were especially designed to assist in the preparation of effective cross-examination and rebuttal. We simply submit that the Court was not entitled to deny plaintiff's motion to strike Chrysler's answer, ignore its own order of February 7, 1973, and then compound the damage by shutting off plaintiff's essential right to rebut.

This right of rebuttal is especially sacred in a products liability case, where the plaintiff's burden of coming forward with evidence on his case in chief is so light. A case in point is Pearson v. Ehrich, 148 App. Div. 680, 133 N.Y.S. 273 (1st Dep't 1912), wherein the plaintiff relied on the doctrine of res ipsa loquitur, a doctrine which

closely parallels the theory of liability in a products defect case.

The Appellate Division held as follows:

"Furthermore, it was error to exclude the evidence offered by plaintiff in rebuttal. When the rule of res ipsa loquitur applied, as it did in this case, the fact of the accident, and the attendant circumstances, without further proof of the cause, warrant the inference of negligence, and the plaintiff may rest thereon. If the defendant offers evidence tending to dispel this presumption, it is the right of the plaintiff, in rebuttal, to overcome the attempted explanation by additional evidence. Uggla v. Brokaw, 117 App. Div. 586, 102 N.Y. Supp. 857; Wiley v. Bondy, 23 Misc. Rep. 658, 52 N.Y. Supp. 68; Claflin v. Meyer, 75 N.Y. 260, 31 Am. Rep. 467." (133 N.Y.S. at 274) (emphasis added).

It is easy to understand why the trial Court committed the error which plaintiff assigns herein. In the context of this long and often complicated trial, the Court had the legitimate desire to bring the matter to an end. But, unfortunately, the Court's ruling in prohibiting Professor Rader's testimony would, if confirmed as a proper construction of the law, in fact accomplish precisely the opposite result. If a plaintiff were compelled to rebut, on his case in chief, every adverse inference that arose during cross-examination of his witnesses, on pain of foregoing his right to call rebuttal witnesses regarding those very adverse inferences, plaintiff's case in chief would drag on interminably. A plaintiff is entitled to ascertain precisely what a defendant will contend on its own case, so that rebuttal can be limited to that which is necessary. In this way, the structure of a trial becomes consistent with expeditious disposition of the matter. We respectfully submit that the procedure proposed by Judge Griesa would not be consistent with such expeditious disposition.

In conclusion, we would like to reiterate exactly how crucial it was for Chrysler's defense that an alternative to fatigue failure be

established (see pp. 18-20, supra). Chrysler was allowed to introduce this alternative, improperly we submit, through the testimony of Mazur. Thus, Professor Rader's proposed rebuttal was absolutely critical on this central issue in this case. Moreover, the evidence which he sought to introduce was embodied in a simple and direct laboratory test, which test would have constituted powerful proof to a jury that, at this point, may have been thoroughly confused by the technical and often conflicting testimony of the experts and the "not-so-experts".

We respectfully submit that the Court's ruling which prevented the jury from hearing Professor Rader's tests, on rebuttal, was certainly error, and in the context of this close case, replete with Chrysler's admissions and selective disclosure strategies, it most certainly does not "affirmatively appear from the whole record that the court's rulings were not prejudicial to the plaintiff's cause. Since we cannot be certain that the rulings did not [prejudice plaintiff's cause], it must be presumed that reversible error was committed." Worcester v. Pure Torpedo Co., supra, 127 F.2d at 948 and cases there cited.

POINT III

THE COURT ERRED IN NOT PERMITTING PLAINTIFF TO CONFRONT CHRYSLER'S WITNESS, THOMAS TURNBULL, ON CROSS-EXAMINATION WITH THE DEPOSITION ADMISSIONS OF DONALD GREGORY, CHRYSLER'S OWN METALLURGIST AND FRACTURE ANALYST

As mentioned above, Chrysler's "substitutes" for the well-concealed Gregory, its expert fracture analyst and metallurgist, were the "omni-expert" Mazur and Gregory's hired technician, Mr. Thomas Turnbull. They both had at least one thing in common. Like Mazur, Turnbull was

unqualified for much of the specific testimony he was about to render. Turnbull had only seen the fractured pieces for a portion of one day, on October 2, 1968, when Gregory brought those pieces to Turnbull's office in Schnectady in order to have a series of photographs made (Gregory, 88). Furthermore, Turnbull is neither a metallurgist nor a mechanical engineer (Turnbull, 1033 & 1035). Rather, he is an electron microscopist, a specially trained technician who takes high magnification photographs of fractured metal. As Turnbull described his trade: "It is the, I would say the art of looking at something with an enlargement. Looking at a magnified image" (949).

No laboratory tests or investigations were performed by Turnbull (Gregory, 94-95). And the photographs taken by Turnbull proved to be of little assistance to Gregory in the course of his investigation, for, as Gregory testified on his deposition: "No, it turned out that they [Turnbull's photographs] didn't do me much good in my work" (118). Likewise, Professor Gordon was of the opinion that the art of electron microscopy was of dubious value in the investigation of a metal fracture such as the one in question: "It seems to me rather unlikely that it would be a useful technique" (604; also 633).

However, perhaps the greatest problem with Turnbull's testimony on the stand was the fact that it often conflicted with Gregory's findings and with the conclusions that Turnbull himself had made on the day he took his photographs. Exhibit 148, dated October 2, 1968, is entitled "Fractographic Examination by Tom Turnbull" (41), and consisted of the notes made by Gregory with respect to Turnbull's observations as he viewed the pieces through the electron microscope (Gregory, 96). As already mentioned above, those notes begin with the following conclusions: "Part was running cracked (rounded edge)" (41) (emphasis added). Gregory explained the significance of this

conclusion as follows:

"Q. Of your own knowledge, do you know, or have a belief as to what Mr. Turnbull might have meant by that statement?

A. By the first one?

Q. By the first statement 'part was running cracked.'

A. Apparently, he saw a rounded edge on there, what he thought was a rounded edge on this which would indicate to him that it may have been operating in a cracked condition. (119-20) (emphasis added).

But Chrysler did not have too much difficulty with this admission by Turnbull. It merely resorted to the simple expedient of having Turnbull deny that he ever saw a rounded edge. Turnbull testified as follows:

"It had a sharp choppy appearance in that there were no rounded edges. It was a abrupt crack. There were no ground surfaces or rubbed surfaces on the casehardened area." (962).

This so-called "sharp and choppy" edge indicated to Turnbull a "very violent force breaking the case and pulling apart almost immediately." (963-64). Turnbull demonstrated his "sharp" edge by referring to the bottom righthand photograph (No. 4) in Exhibit BE (970-72, 1011). However, Mr. Gregory's evaluation of this same photograph led him to a markedly different conclusion:

"Q. When you looked at the photograph in the lower right-hand corner of Exhibit 142 [Trial Exhibit BE] did you see anything of significance there in terms of an edged condition?

A. No, I do not." (122).

With respect to the actual language used in Exhibit 148, Turnbull offered a strained interpretation; to wit: "if the part was running cracked then we should find certain evidence to that effect." (1051) (emphasis added). But, of course, that is not what the words say,

and, most importantly, the words were not Turnbull's. They were Gregory's words, and his interpretation was quite different and significantly adverse to the defense (see p. 62, supra).

However, like Gregory, Turnbull was forced to admit that the Pitman arm stud fractured in two stages (965). But there the similarity between the testimony of these two men began and ended. Somehow, Turnbull managed to discern a separate "cup and cone" on each side of the line separating the stages of fracture (995-96), even though at one point he had admitted that the fracture face was "approximately flat" (958-59). It is very significant that Turnbull made no reference to "cups" or "cones" in his findings and conclusions which were embodied in Exhibit 148 (41-44). But while on the stand, he reviewed the same photographs he had taken on October 2, 1968, and had no trouble detecting this metallurgical phenomenon.

The "cups" and "cones" observed by Turnbull indicated to him that each stage of the fracture was in the nature of a "tensile high impact fracture." (997). Indeed, a true "cup and cone" feature is always produced in ductile (or relatively soft) metal when it fractures under conditions of pure tension. Tension, in this respect, literally means a pulling at both ends. As the piece of metal, in this case the stud, is pulled, it stretches and becomes narrowed, and when the metal finally parts it does not create flat fracture faces; rather, one piece takes the form of a "cup" shape, which fits into a corresponding "cone" shape on the other piece (Gregory, 109; Rader, 1097). A fatigue fracture does not produce the "cup and cone" feature, but rather gives rise to essentially flat fracture surfaces (Gregory, 110).

It is not the province of this appeal to create a factual debate with respect to the existence or non-existence of the "cup and cone"

feature on the Pitman arm stud pieces in question, but suffice it to say that the existence of this metallurgical phenomenon was hotly contested by plaintiff's experts (see, for example, Rader, 1097-1101).

Putting this factual dispute to the side, what should be emphasized here is the fact that Chrysler's expert metallurgist, Mr. Donald Gregory, could only find definitive evidence of tensile impact fracture with respect to one stage of the two-stage fracture. As he put it:

"The remaining portion of the fracture was indeterminate. We couldn't tell - I couldn't tell as to whether both stages were impact or fatigue from my examination." (116) (emphasis added).

And in spite of Gregory's finding some evidence of the "cup and cone" phenomenon, as noted above on page 18 he had absolutely no opinion as to whether the entire stud fractured in fatigue or impact (132).

In this connection, it is important to note that Gregory must have specifically considered Turnbull's theories and rejected them, because as Turnbull testified, the latter informed Gregory, as early as October 2, 1968, of his opinion that the entire Pitman arm stud fractured as a result of impact (1027). Oddly enough, however, Turnbull claimed that he had never seen those conclusions of Gregory's which were embodied in Exhibit 149 (45-46) (memorandum to Dudley of Chrysler's legal staff, dated October 30, 1970) until he was on the witness stand in 1973 (1044-45). Thus, Chrysler had clearly engaged in an extremely questionable tactic in allowing this technician named Turnbull to take the stand and utter opinions demonstrably outside the scope of his expertise, without ever informing him that Chrysler's own expert metallurgist disagreed with these opinions in several major respects.

The prejudice to plaintiff which accrued by reason of this tactic of foisting the unenlightened Turnbull upon the Court and jury (while hiding Gregory) could have been remedied to a significant extent. Plaintiff should have been allowed to confront Turnbull with Gregory's testimony, during Turnbull's cross-examination, by reading portions of Gregory's deposition to the jury at that time.

But the trial Court would not permit this. In an unrecorded conference, it ruled that Gregory's deposition could only be read on rebuttal. Chrysler's direct case did not end until March 19, 1973, and the first thing plaintiff did on rebuttal was to read Gregory's deposition. However, the cross-examination of Turnbull had concluded four days earlier. Obviously, the lapse of time between Turnbull's cross-examination and the reading of Gregory's deposition drastically diminished the effect upon the jury which could be obtained by the clear inconsistencies between the testimony of Gregory and Turnbull. Especially with respect to the highly-technical matters which were here involved, the jurors could hardly be expected to have retained a precise recollection of Turnbull's findings and explanations. And, while reading Gregory's deposition, plaintiff's counsel, of course, could not be permitted to remind the jurors precisely what Turnbull had said.

Thus, the impact was lost. And this was a direct consequence of Judge Griesa's erroneous ruling that Gregory's deposition could not be read during Turnbull's cross-examination. Gregory played a supervisory role with respect to Chrysler's analysis of the failed Pitman arm stud, and was clearly a "managing agent" of Chrysler within the meaning of Rule 32(a)(2) of the FRCP. New Rochelle Tool Corp. v. Ohio Crankshaft Co., 25 F.R.D. 20, 22 (N.D. Ohio 1960); Klop v.

United Fruit Company, 18 F.R.D. 310, 313 (S.D.N.Y. 1955). Therefore, his testimony constituted admissions which, by the terms of the Rule, could have been utilized at trial "for any purpose." Riley v. Layton, 329 F.2d 53, 58 (10th Cir. 1964) (defendant may be confronted, on cross-examination, with deposition of co-defendant, not for impeachment purposes, but to test his knowledge of substance of co-defendant's testimony); Community Counseling Service, Inc. v. Reilly, 317 F.2d 239, 243 (4th Cir. 1963) (deposition of a party is substantive proof and may be introduced even though that party has already testified); Cleary v. Indiana Beach, Inc., 275 F.2d 543, 550-51 (7th Cir. 1960) cert. denied, 364 U.S. 825; Pfotzer v. Aqua Systems, 162 F.2d 779, 785 (2nd Cir. 1947).

Certainly, if Gregory's findings and conclusions had been embodied in responses to a Request for Admissions pursuant to Rule 36, there could be no disputing the fact that plaintiff was entitled to read those responses at any time during the trial. Inasmuch as Gregory's deposition was the deposition of Chrysler, the situation was no different and plaintiff should have been entitled to read that deposition at a time during the trial when such a reading could have produced a meaningful effect upon the jury.

Even if it could be said that Gregory was not the "managing agent" of Chrysler for this purpose, he was located more than 100 miles from the Courthouse at the time of trial, and his deposition was therefore usable for "any purpose" pursuant to Rule 32(a)(3).

The failure to allow plaintiff's counsel to read Gregory's deposition while Turnbull was on the stand, was, we respectfully submit, prejudicial error on this close and severely litigated case,

particularly when taken in the aggregate with the rulings discussed in the prior Points.

CONCLUSION

Plaintiff is entitled to a remand and new trial in this matter, and this Honorable Court should so order and direct.

Respectfully submitted,

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Of Counsel.

AFFIDAVIT OF SERVICE BY MAIL

STATE OF NEW YORK, COUNTY OF NEW YORK

) ss. :

Elise Talvi, being duly sworn, deposes and says that she is employed by the attorneys for the within named Appellant herein. That on the 7 day of Jan. 19. 75 she served within two copies each of Appellant's Brief and Reply Brief upon the following attorney(s) for the part(y)(ies) and at the address(es) indicated below:

<u>Party</u>	<u>Attorney</u>	<u>Address</u>
Appellees	Emile Z. Berman and A. Harold Frost	77 Water Street New York, NY 10005

by depositing true copies of the same securely enclosed in a post-paid wrapper in a Branch Post-Office or a Post Office Box regularly maintained by the United States Government at 450 Park Avenue, New York, New York, directed to the aforesaid attorney(s) at the address(es) listed above, that (those) being the address(es) within the state designated by each of them for that purpose upon the preceding papers in this action or the place where each of them then kept an office, between which places there then was and now is a regular communication by mail.

Elise Talvi
Elise Talvi

Sworn to before me this 7th
day of January 1975

Elizabeth H. Cunningham

ELIZABETH H. CUNNINGHAM
Notary Public, State of New York
No. 5882415
Qualified in New York County
Commission Expires March 30, 1976